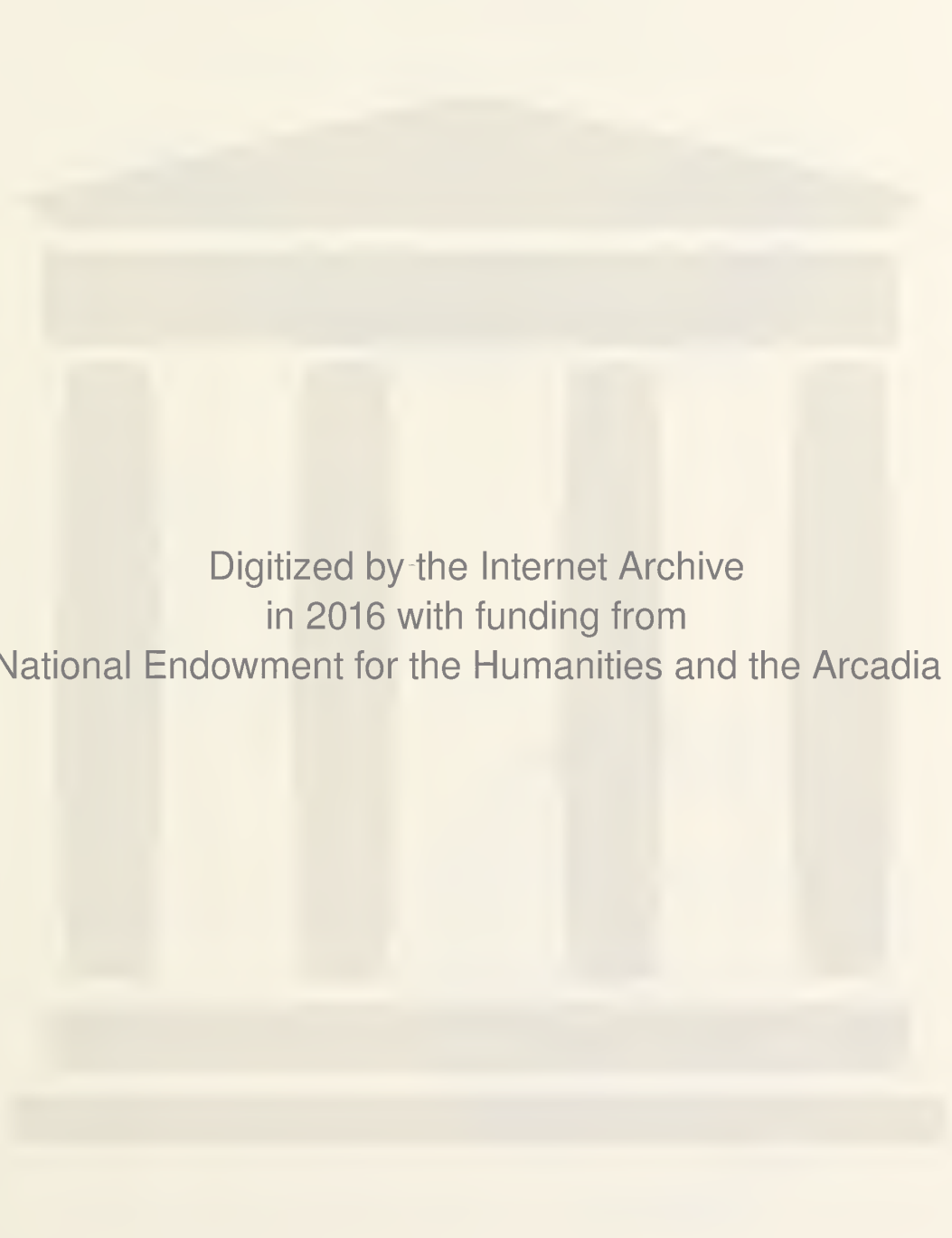




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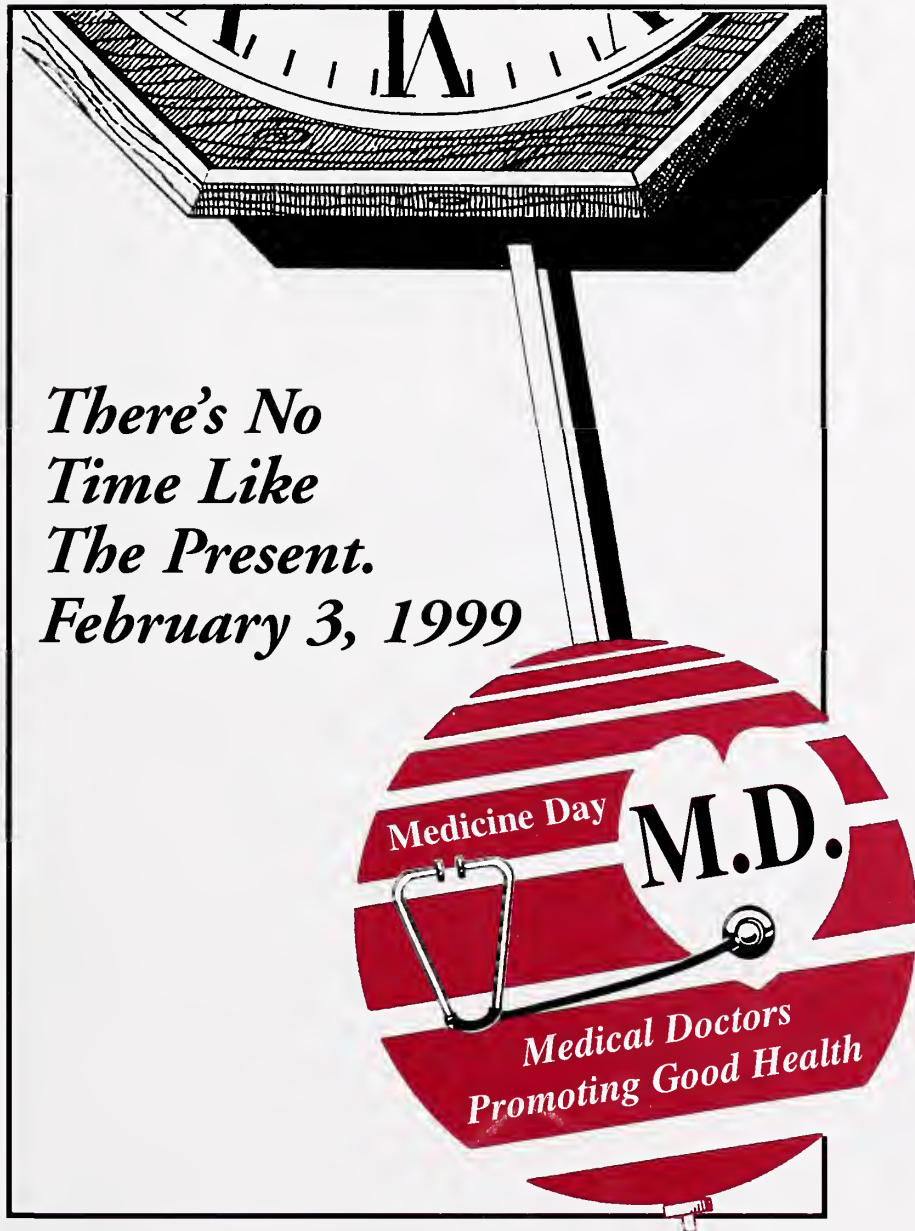
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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

JANUARY 1999

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## Ideas Wanted

In this "winter of our discontent," a friend of the medical profession can readily see that many, if not most, physicians are suffering from a declining job satisfaction. In an era noted for increasingly effective medical treatments, more than adequate financial rewards, and quite comfortable working conditions, a majority of physicians are disgruntled with their role and status in our society.

Doubtless there are many demons running amok today in our medical economics, such as Medicare, Medicaid, HMOs, preferred provider contracts, and many other squeezes on the health care dollar. But the typical physician seems to be more distraught by a loss of influence than loss of income. That medical knowledge and wisdom are no longer heard in the halls of government is quite disheartening to many physicians.

For the medical profession, there have been many legislative and insurance fiascos signaling that the people and their legislators have little regard for medical opinion in policy matters. Here in Oklahoma, the enactment of the optometry surgery bill (SB 1192) made clear to many physicians that we must modify our perceived public image and the relationship of medicine to government.

While many physicians are now energized to seek or to consider a change in their relationship to society, there is great uncertainty about methodology and the ultimate role to be attained.

Albert Schweitzer and Virginia Apgar can no longer be our role models for the age we are entering. How should medicine relate to our government? How should physicians restore their authenticity with the people? How can we physicians find a comfortable role in this new society?

In a search for fresh ideas in these troubled waters, Dr. Noble L. Ballard has asked a series of 17 questions that are addressed to Oklahoma physicians. OSMA members and concerned physicians are encouraged to consider the questions printed on page 40 in the Letter to the Editor section, and to send their answers to:

Noble L. Ballard, MD  
c/o Journal  
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We hope to elicit a swarm of ideas that will energize a physician-led health reform movement toward a more productive relationship between physicians and society.

The response to Dr. Ballard's questions will be reported to *Journal* readers.



Ray V. McIntyre, MD  
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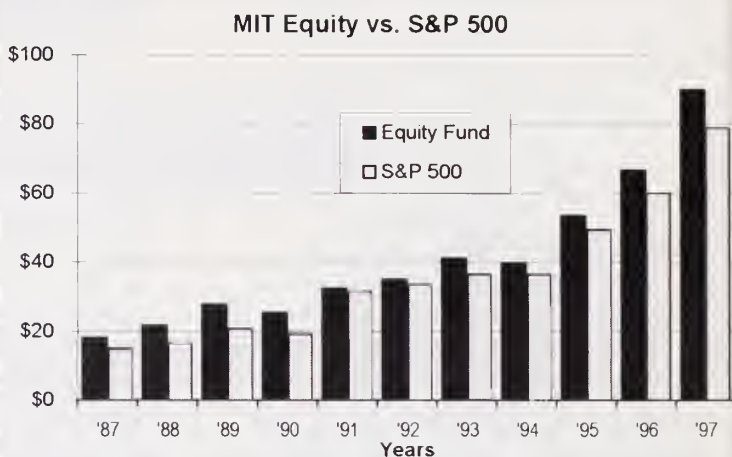
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# PRESIDENT'S PAGE

## Happy New Year

Welcome to the New Year, that famous 1999. The beginning of the year heralds change. Many county

medical societies have installed new leaders and there is a promise and hope of change. This occurs at a time when trees are barren and yards no longer green! Yet the opportunity for introducing new ideas, of working with others, does exist.

Some new ideas have familiar trends. Oklahoma physicians are knowledgeable about challenges to the health of our citizens.

The annual Oklahoma State Department of Health report of the *State of the State's Health* documents the areas of health needs. Cardiovascular disease, stroke and obesity head the list of ailments associated with high morbidity in Oklahomans. During the next few months, specific initiatives will be introduced by the OSMA to address these diseases.

This year, you are asked to work with others and make a special effort to attend Medicine Day at the State Capitol on Feb. 3, 1999. Physicians and their spouses who have attended this event find it helpful. Medicine Day begins at 9 a.m. and is completed by 1 p.m.



Mrs. Sherry Strebel has detailed the day in the Alliance Page. Your attendance and participation is important to the health of Oklahomans, which is the OSMA mission.

The importance of physician input is straightforward—doctors are knowledgeable about the medical issues facing our legislators. Solutions to the legislative challenges are the focus of the initiatives that are developed by the Legislative Council of the OSMA. And your personal Representative or Senator, from your own district and hometown, respects your views.

Your voice is needed. Your time is important. Please plan to attend Medicine Day at the Capitol on Feb. 3, 1999.

Hope to see you there. Happy New Year.

A handwritten signature in cursive script that reads "Mary Anne McCaffree".

Mary Anne McCaffree, MD  
OSMA President

---

"The importance  
of physician  
input is  
straightforward.  
Doctors are  
knowledgeable  
about the  
medical issues  
facing our  
legislators."

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ered, the key points of methodology and success of execution, the key finding, and the conclusions directly supported by these findings.

Bylines may contain no more than six (6) names and shall include only those individuals who can attest that they have contributed to the conception and design, or analysis and interpretation of data; and to drafting the article or revising it critically for important intellectual content; and to final approval of the version to be published. Other contributions may be recognized in an acknowledgment.

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## Clinical Significance of an Extensor Tendon Anomaly to the Little Finger — A New Finding

Houshang Seradge, MD; Wen Tian, MD; Carrie Roberts, OTR

A new anatomical variation of extensor digiti minimi (EDM) was discovered during our anatomical studies. The EDM usually gives one tendon to the little finger to extend the metacarpophalangeal joint (MPJ) independently from the other fingers. The EDM in our cadaver had three tendon slips. It supplied the MPJ of the little finger with two tendon slips. Along with the extensor digitorum communis (EDC), the EDM also had an additional slip to the ring finger MPJ extensor hood apparatus. The little finger also received a separate tendon from EDC.

### Clinical Significance

The true incidence of such an anatomical anomaly is not known. However, the clinician should be alerted that a patient with even a small laceration on the back of the hand or wrist can cut their tendon completely and still show the ability to actively extend the finger MPJ. A careful inspection and evaluation of wounds to the dorsum of the hand and wrist is warranted to identify the extent of the injury and to provide a proper treatment.

### Introduction

Extensor tendon anatomy to the hand has been studied extensively.<sup>1-5</sup> The extensor tendons to the little finger were considered to originate from the EDC and the EDM<sup>1-6</sup> and insert into the extensor hood mechanism of the metacarpophalangeal joint. Significant variability of EDM to the little finger has been documented<sup>1,2,6-9</sup> including an absence of EDM to the little finger.<sup>2</sup> We found a variation of EDM not described in the past. The EDM not only supplied the little finger, but the ring finger as well. The EDC also supplied both fingers. This combination causes a special clinical presentation.

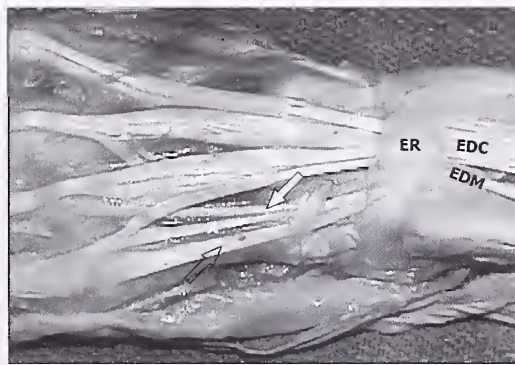


Figure 1: Dorsol view of the wrist depicting the triple slips of the extensor digiti minimi.

|                |                                       |
|----------------|---------------------------------------|
| EDC            | Extensor digitorum communis           |
| EDM            | Extensor digiti minimi                |
| ER             | Extensor retinaculum                  |
| (White Arrow)  | Radial slip of extensor digiti minimi |
| White X        | Middle slip of extensor digiti minimi |
| (Hollow Arrow) | Ulnar slip of extensor digiti minimi  |

### Materials and Methods

#### Anatomical Dissection

We evaluated the extensor tendon anatomy to the left upper limb of a fresh, frozen, human specimen, 60 years old at the time of death. The extensor carpi ulnaris (EDU), the EDC and the EDM originated from the lateral epicondyle. The tendon of EDM entered the 5th extensor compartment at the wrist and divided into three slips as it emerged from the compartment. The ulnar slip was twice as large as the middle and radial slips. (Fig. 1)

An additional pulley exclusively serving the tendons of EDM was discovered further distal to the wrist extensor retinaculum measuring 1.8 cm wide and 0.6 cm long. (Fig. 2) The EDM pulley was made up of two fibro-osseous tunnels attached to the 4th and 5th metacarpals.

Direct Correspondence to: Houshang Seradge, MD, The Hand Institute of Oklahoma, 1044 S.W. 44th, 6th Floor, Oklahoma City, Okla. 73109.

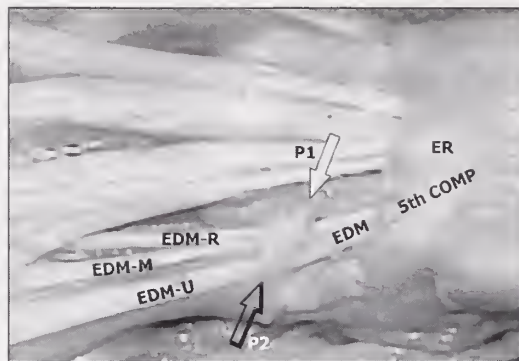


Figure 2: Extensor digiti minimi pulley in the hand.

|                  |  |
|------------------|--|
| EDM              | Extensor digiti minimi                                       |
| ER               | Extensor retinaculum   |
| P1 (black arrow) | Tunnel for radiol and middle slips of extensor digiti minimi |
| P2 (white arrow) | Tunnel for ulnar slip of extensor digiti minimi              |
| 5th COMP         | 5th extensor compartment                                     |
| EDM-R            | Radiol slip of extensor digiti minimi                        |
| EDM-M            | Middle slip of extensor digiti minimi                        |
| EDM-U            | Ulnor slip of extensor digiti minimi                         |

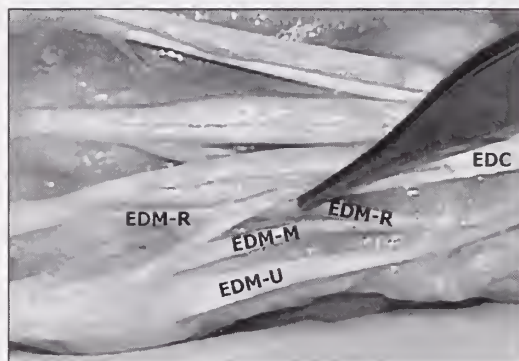


Figure 3: Extensor digiti minimi tendons to the little and ring fingers. The instrument is radiolally retrocting extensor digitorum communis to the little finger.

|       |                                       |
|-------|---------------------------------------|
| EDC   | Extensor digitorum communis           |
| EDM-R | Radiol slip of extensor digiti minimi |
| EDM-M | Middle slip of extensor digiti minimi |
| EDM-U | Ulnor slip of extensor digiti minimi  |

The radial and the middle slips of the EDM tendons passed through the radial fibro-osseous tunnel and the ulnar slip passed through the ulnar side. (Fig. 2) The radial slip of the EDM tendon joined the EDC to create a common tendon and inserted into the extensor hood of the ring finger metacarpophalangeal joint. The ulnar slip of the EDM tendon attached to the extensor hood of the little finger directly in midline. The middle slip of the EDM tendon joined the EDC to share a common insertion at the radial side of the extensor hood of the little finger metacarpophalangeal joint. (Fig. 3)

In addition, the ulnar slip of the EDC tendon after passing through the 4th compartment, divided into two slips supplying both the ring and the little finger metacarpophalangeal joints. (Fig. 5)

## Functional Variations

When we pulled on the EDM (proximal to the extensor retinaculum), the metacarpophalangeal joints of the ring and little fingers were simultaneously extended. (Fig. 5) Also when we pulled on the EDC tendon to the little finger (proximal to the wrist extensor retinaculum), the little and ring fingers were extended simultaneously. Therefore, pulling on either the EDC or EDM proximally, at a level proximal to the wrist extensor retinaculum, extended the metacarpophalangeal joints of the ring and little fingers simultaneously. (Fig. 5)

## Discussion

An EDM with three tendon slips was found in six percent of 50 hands dissected by Gonzales and his co-workers.<sup>3</sup> However, he did not find an EDM supplying the ring finger. In another study, Schenk<sup>7</sup> dissected 57 hands and found three tendon slips in the EDM of four hands. The ring finger received a contribution from the EDM in two of their specimens. In another study, Leslie<sup>6</sup> reported an EDM with three slips in three of 127 hands. An extra slip of the EDM joined the EDC to insert into the extensor hood mechanism of the ring finger MPJ in two specimens. Von Schroeder et al<sup>8</sup> reported an insertion of the EDM to the ring finger in one hand, and an abnormal insertion of EDC to the little finger in two other specimens of 43 hands they dissected.

We found a cross over of EDM and EDC to the ring and little fingers not previously reported. In our specimen, a separate tendon slip of the EDM inserted into the ring finger and a separate tendon slip of the EDC inserted to the little finger extensor hood. We also found a sepa-

rated pulley for the EDM tendon slips not identified previously.

Our findings suggest that the little finger metacarpophalangeal joint could not actively extend independently. Therefore, a clinician faced with a common small laceration on the dorsum of the hand may overlook the possibility of a tendon laceration if the wound is not thoroughly examined. Variations in extensor tendon anatomy of the hand can mimic a lacerated tendon in the case of inability to independently extend the little finger metacarpophalangeal joint actively as this case showed. Or, a lacerated tendon can be overlooked if the physician relies on the patient's ability to extend his fingers and not thoroughly explore the wound on the dorsum of the hand or the wrist.

**Acknowledgements**

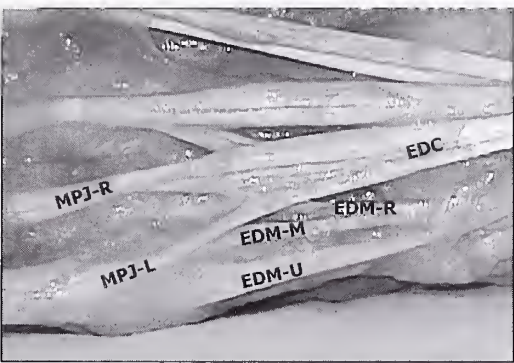
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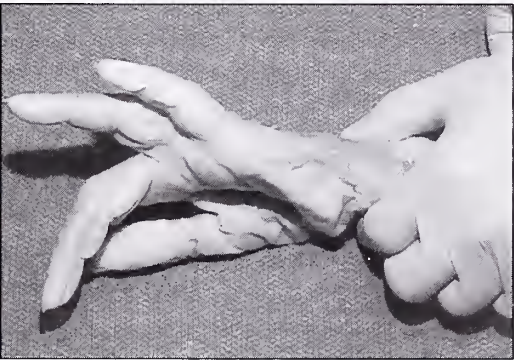
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**Figure 4:** Insertion of the extensor digitorum communis at the metacarpophalangeal level.

|       |  |
|-------|--|
| EDC   | Extensor digitorum communis                    |
| EDM-R | Radial slip of extensor digiti minimi          |
| EDM-M | Middle slip of extensor digiti minimi          |
| EDM-U | Ulnar slip of extensor digiti minimi           |
| MPJ-R | Metacarpophalangeal joint of the ring finger   |
| MPJ-L | Metacarpophalangeal joint of the little finger |



**Figure 5:** Extensor digiti minimi extends the metacarpophalangeal joints for both the little and ring fingers. (The EDM is pulled proximally.)

## **Preserved Cognitive Skills in Dementia: Implications for Geriatric Medicine**

William W. Beatty, PhD

Despite their severe and global cognitive impairments, some patients with Alzheimer's disease or vascular dementia continue to perform some complex mental activities skillfully. This paper briefly describes the artistic and game-playing skills of dementia patients, presents preliminary findings indicating that dementia patients with preserved skills exhibit slower cognitive deterioration than patients without retained cognitive skills, and illustrates how caregivers and other persons can utilize preserved abilities in the management of agitated and disruptive behavior.

Dementia, by definition, involves pervasive and severe losses of cognitive function that interfere with performing activities of everyday living. Because traditionally examinations in medicine are focused on discovering deficits, clinicians rarely ask what relatively complex tasks patients with suspected memory and other intellectual disabilities can still perform well. The purpose of this article is to describe some of the mentally demanding activities that patients with probable Alzheimer's disease or vascular dementia perform normally, focusing on the possible practical implications of the phenomenon of preserved cognitive skills for clinical care and patient management.

### **What cognitive skills are preserved?**

Studies of patients who met modern diagnostic criteria for Alzheimer's disease<sup>1</sup> or vascular dementia<sup>2</sup> describe individuals with retained abilities to paint,<sup>3</sup> play musical instruments,<sup>4,7</sup> and compete successfully at games such as contract bridge<sup>6</sup> and dominoes.<sup>6-8</sup> Unpublished anecdotes describe patients who retained the ability to play chess. All of the above abilities

were acquired early in adult life and practiced extensively before the onset of dementia. However, in two cases, one published,<sup>6</sup> one unpublished, patients with probable AD acquired skill at solving complex jigsaw puzzles after the diagnosis of their dementias.

A very common finding is that demented patients who competently display their retained skill under actual "real-world" conditions will exhibit little or no knowledge if asked questions about their preserved ability outside the context of the performance of the skill. So, for example, musicians can often play to command pieces whose titles they can neither recall nor recognize when they listen to recordings of the compositions.<sup>4,6</sup> Other examples include a bridge player who could not name the suits<sup>6</sup> and domino players who could not state the largest or smallest domino in the set, although the same patients could accurately select the largest and smallest dominoes from an array of real dominoes.<sup>8</sup>

The proper interpretation of the above dissociation remains a matter of intense debate. However, it is fair to say that the findings indicate that a substantial amount of the pervasive cognitive deterioration in dementia may reflect loss of access to memories that are structurally intact or only minimally degraded. To the extent that access rather than irreversible loss of stored knowledge is the main problem, it may be possible to devise pharmacological therapies that promote access and partially restore function. Preliminary evidence indicates that d-amphetamine has exactly this effect in stroke patients.<sup>9,10</sup>

The prevalence of preserved cognitive skills in dementia is unknown, but identifying patients with such skills is quite easy. I have developed

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a brief instrument that can be completed by caregivers in the waiting room in about five minutes. Alternatively, the instrument can be used as the basis for a semi-structured interview administered by telephone.

## **Immediate applications**

### **1. Skilled dementia patients as teachers.**

One patient, a retired teacher, taught the author how to play canasta, a game that he did not know how to play.<sup>6</sup> Her teaching efforts were so successful that the author's team won both matches. A second patient, a man with only a fourth-grade education, taught one of the author's assistants how to play dominoes.<sup>11</sup> Marshalling the skills of patients with retained abilities could provide valuable support to overburdened staff in nursing homes and adult day care centers. Although difficult to measure, benefits to patient self-esteem might also be anticipated.

### **2. Patient Management.**

Patients with dementia exhibit numerous behavioral disturbances that cause caregivers much misery. These include wandering and getting lost, ruminative and often paranoid thoughts and accusations, repetitive questioning as well as mild generalized agitation and frank physical aggression. Medications are used with some success to blunt these behaviors, but the medications do not act quickly even if they are effective. Further, many medications used to control disruptive behavior have undesirable neurological and cognitive side effects, especially when administered chronically.

We have found that it is frequently possible to break up mild agitation by engaging patients in other activities which they enjoy. These activities can include the preserved cognitive skills described above, but any activity that will attract the patient's attention for a few minutes (e.g., coloring in coloring books, folding towels) will work equally well. Once the patient's attention is diverted, his profound memory disturbance actually serves as an advantage, because he can't remember what was bothering him. The first activity tried may not work; if so, try another. When this approach works, it works quickly (almost magically) and provides a tremendous sense of empowerment to caregivers. The treatment is free and has no side effects. Finally, this patient management strategy can be combined with medications if necessary.

## **Possible influence of retained skills on disease progression**

We have been conducting a longitudinal study of dementia patients who have preserved cognitive skills and those who do not, with the objective of determining whether any subset of abilities assessed by neuropsychological tests are correlated with the existence of preserved skills. Although this objective has not yet been realized, we have obtained preliminary evidence that patients with preserved cognitive skills may deteriorate more slowly than patients without such skills.

The subjects were 52 patients with dementia. Thirty-five met diagnostic criteria for possible or probable AD;<sup>1</sup> the remaining included 15 patients with vascular dementia,<sup>2</sup> one with frontotemporal dementia and one with dementia NOS. Thirty-three patients were women and 19 were men.

At the time of initial neuropsychological testing (Year 1), 35 patients displayed musical or game playing skills of the sort described above; the remaining 17 patients did not display such abilities. Of the patients with preserved skills at Year 1, 25 (71.4%) successfully completed neuropsychological testing at Year 2 compared to five (29.4%) of the patients without skills ( $\chi^2(1) = 6.64, p < 0.01$ ). Subsequent analyses on the Year 1 data indicated that there were no significant main effects of skill or testing status at Year 2 or the interactions of these variables for age, education or overall mental status as measured by the Mini-Mental State Exam<sup>12</sup> ( $F(1,48) < 1.15, ps > 0.05$ ). Likewise, dementia diagnosis did not account for the differences between skilled and unskilled patients in completion of Year 2 testing.

Not surprisingly, female patients were more likely to complete Year 2 testing than males. However, reanalysis of the data including only female patients showed that 86.4 percent of the women patients with preserved skills at Year 1, but only 45.5 percent of the women patients without retained skills completed Year 2 testing ( $\chi^2(1) = 4.30, p < 0.05$ ). Reasons that patients did not complete Year 2 testing were varied and included death, refused continued participation, moved to distant nursing homes because they had become unmanageable and direct failures to complete testing (i.e., the testers tried repeatedly, but patients could not comprehend the tests). The various causes of failure to complete Year 2 testing were not systematically related to the presence or absence of preserved cognitive skill at Year 1.

There are many possible explanations for these fascinating results. The presence of a retained complex ability might simply be a marker for relatively slow cognitive decline in dementia. Alternatively, the retained abilities of dementia patients may allow them to interact relatively normally with family, friends and other people, providing social stimulation and reinforcement which ultimately leads to better test performance. Finally, an unknown neuro-protective influence of preserved skills cannot be ruled out.

### Conclusions

The phenomenon of preserved cognitive skills in dementia poses fascinating philosophical questions about what it means "to know", challenges the traditional concept that memory failure in dementia always arises from irreversible structural loss and offers simple, safe and inexpensive strategies for patient management. By investing about five minutes of caregiver time, geriatricians can identify patients with preserved cognitive skills and improve the quality of care for patients with dementia and their caregivers. Clinicians who make this investment will simultaneously contribute to the scientific understanding of this intriguing phenomenon.

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From a recent discussion about the leading causes of death in Oklahoma as published in the *State of the State's Health* by the Oklahoma State Department of Health.

OSMA Public and Mental Health Council member Hal Vorse, MD, had this to say:

"If we had an epidemic that was causing this many deaths, it would be considered a health crisis."

## Age-Related Physiological Alterations to Muscles and Joints and Potential Exercise Interventions for their Improvement

Michael G. Bemben, PhD

This review article presents some general concepts related to the study of human aging that have specific implications for the maintenance or the development of improved muscular fitness in the elderly. Normal age-related alterations in muscle tissue, muscle function, and joint articulation, as well as possible mechanisms for these changes are presented and the current literature dealing with the use of exercise interventions to help stop or slow down the normal aging process is also summarized. Suggestions for basic evaluation and programming design are presented that address the needs of the older population.

### Introduction

One of the most significant alterations that occurs during the aging process is the reduction in functional movement. Reduced mobility and the possible increase in dynamic instability can cause changes in balance, decreases in muscle strength, and reductions in the range of joint motion. These changes can initiate a cycle of decreased physical activity, followed by greater decreases in strength and flexibility, and increased sedentary behavior, a cycle often referred to as "Hypokinetic Syndrome."<sup>1</sup>

There is no disputing the fact that there is an inevitable decline in the physiological capacity of humans as we age. It has often been reported that there is a loss of muscle mass and concomitant reductions in muscular strength and joint flexibility with increased age.<sup>2,3</sup> However, major problems that make research dealing with human aging very difficult to interpret are the lack of longitudinal studies as well as confounding factors such as genetic predisposition, differences in physical activity levels, dietary intakes, and other lifestyle differences.

### General Aging Concepts

The term "aging" can mean different things to different people. Perhaps the most appropriate definition of aging for this paper refers to the loss of one's ability to adapt to a changing environment.<sup>4</sup> The research presented in this review will attempt to relate the physiological changes due to aging or inactivity to activities of daily living and the potential maintenance of functional independence through appropriate exercise interventions for the elderly.

One general concept of aging that most of us are aware of but sometimes forget, is the fact that individuals, as well as the different systems of the body, age at different rates. This is an important concept in the realm of aging research since it offers the potential of being able to identify successful aging in a given individual or a given physiological system and then create similar conditions in others in an attempt to minimize the loss of functional cells or tissue. It is a well established fact that many biological systems decline every day as the result of cell death. The age-related loss of functioning cells results in a general loss of tissue and is associated with the disappearance of muscle and nerve. As a result, one outcome of human aging is a decline in one's ability to exercise and do work. This decreased ability to exercise is characterized by a reduced capacity for the body to engage in activity and also a failure to return back to normal resting levels as quickly as the young. Thus, increased recovery time is one indication of a decreased ability to adapt to a changing environment as mentioned in our basic definition of human aging.

Another concept that is perhaps more important than the recording of chronological age for classifying individuals is the notion of being

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able to assess physiological or biological age. Physiological age refers to one's ability to adapt to a given situation and can be somewhat independent of chronological age. Many professions such as firefighters and police officers are beginning to use an evaluation based on the ability to perform functional duties rather than age alone to determine what an individual's role becomes in a given occupation or at a particular time in one's career.

Senile muscle atrophy or the normal loss of muscle mass with increased age can either occur from myopathic alterations (like cellular necrosis or fibrosis), the interaction of neuropathic changes with muscle tissue (such as type grouping or grouped atrophy), or from physical inactivity or hypokinesis. In all probability, senile muscle atrophy, the loss of force production, and the resultant changes in flexibility cannot be explained by any one single factor, but rather a combination of factors that often leads to a functional denervation and a reduced capacity for normal activity.

### **Normal Age-Related Alterations to Muscle**

The most often reported consequence of normal aging is the loss of skeletal muscle mass or sarcopenia.<sup>5</sup> Sarcopenia comes from the Greek word "sarco" referring to flesh, and "penia," indicating a deficiency.<sup>5</sup> Thus, sarcopenia is a generic term for the loss of skeletal muscle mass, quality, and strength that often leads to frailty in the elderly. Sarcopenia is believed to be due predominately to disuse atrophy of skeletal muscle fibers; however, age-associated changes in neuromuscular function and in the production of, or tissue responsiveness to trophic factors, also represent important underlying causes.

One of the most obvious manifestations of a decrease in muscle mass is the decreased ability for force production. This decrease in the force-producing capacity of skeletal muscle is, however, not a universal phenomena among all muscle groups, but rather dependent on the type of contraction being performed (i.e., isometric, isotonic, isokinetic, or dynamic), and the particular muscle group being examined. Data collected at the University of Illinois with men between the ages of 20 and 75 years supports the notion of a variable loss in muscular strength dependent on the muscle group studied.<sup>6</sup> Maximal isometric strength for five different muscle groups provided comparisons between large and small muscle groups, upper

and lower body locations, and the amount of expected daily usage. The earliest declines in strength were reported for the forearm extensors, dorsiflexors, and the plantar flexors around age 40, while the greatest overall loss of strength occurred for the two lower limb muscles, the dorsiflexors and plantar flexors. These findings support the existing literature that suggests that the muscles of the lower limb are affected to a greater extent during the aging process than the upper extremities.<sup>7,8</sup>

Because of the countless number of difficulties associated with longitudinal studies, there is a paucity of information regarding changes in strength over a number of years within the same individual. In one of the few longitudinal studies found in the literature, Aniansson et al (1986) studied 23 men between the ages of 73 and 83 years of age over a seven-year time span.<sup>9</sup> They reported that during this time, muscular strength of the vastus lateralis declined by 10 to 22 percent at five different contraction velocities with the greatest declines occurring at the fastest speeds. Additionally, during this time span, the muscle fibers generally associated with strength and power, the Type IIa (oxidative-glycolytic) and IIb (glycolytic) fibers, decreased in cross-sectional area by 14 and 25 percent respectively, while Type I (oxidative) fiber areas remained unchanged.

Perhaps a characteristic more important than the production of maximal strength, is the ability to maintain muscular endurance in the elderly. This literature is somewhat more equivocal. Using an animal model to study age related effects on muscular performance, Fitts et al (1984) reported no differences in the fatigability of the soleus muscle of 9- and 28-month-old rats, although the aged muscles had higher lactate and lower glycogen levels, which suggested a difference in the metabolic responses to prolonged contractile activity.<sup>10</sup> In support of the animal literature, a number of researchers have reported similar findings with elderly men and women.<sup>11,12</sup> They suggest that 70-year-old subjects were able to maintain voluntary isometric and dynamic muscular contractions for up to 60 seconds when compared to younger individuals, as long as the contractions were performed at the same relative percentage of maximal voluntary contraction (MVC). On the other hand, some researchers such as Lenmeken et al (1985) have found that older men had a significantly greater loss of force production over a 30-second period when the potential confounding factor of motivation was removed by using electric

cal stimulation of the adductor pollicis muscle.<sup>13</sup> This reduced muscular endurance for elderly skeletal muscle has also been reported by Davies and co-workers using the ankle plantar flexors and elbow flexor muscle groups.<sup>14</sup>

Data from our research group has indicated that the decrement in the ability to maintain isometric intermittent force production is not so much a function of age, but rather related to muscle group location, with the muscles of the lower extremity better able to maintain force output when compared to the muscles of the upper extremity.<sup>15</sup>

When searching for possible reasons for the changes observed in the force-producing capabilities of aging skeletal muscle, we need to first examine changes in muscle fiber size, since strength is related to the CSA of each muscle fiber. A number of studies based on muscle biopsy samples report that human Type I muscle fibers seem to be relatively resistant to age-associated atrophy, at least until the ages of 60 to 70 years, while Type II muscle fiber areas appear to get smaller. It is generally accepted that human muscle fibers appear to reach their maximal size in the 3rd or 4th decade with the Type II fibers being 15 to 20 percent larger than the Type I fibers. By the 7th decade, these two fiber types are equal in size and by the age of 85 years, the Type II fibers are actually only 50 percent the size of the Type I fibers. However, a fairly recent study by Lexell et al (1989) who evaluated whole vastus lateralis muscles taken from men at autopsy, reported similar losses in size for both fiber types.<sup>16</sup>

Another factor affecting the force-producing capabilities of muscle is fiber number. Changes in fiber number can occur from either the selective loss of one particular fiber type or a loss of both types of muscle fibers. Again, these data are somewhat controversial. Some of the literature supports a selective loss of Type II fibers and an overall decrease in fiber number. These observations are based on the fact that there is a loss in the number of the largest functioning alpha motoneurons, the ones innervating Type II fibers.<sup>17</sup> As these motor units begin to drop out, there appears to be an adaptive process that involves axonal sprouting from the remaining alpha motoneurons which can lead to the reinnervation of at least some fibers. This ultimately results in fewer motor units being responsible for larger fiber areas and the overall composition of the motor units within a given muscle, being more homogeneous with respect to Type I fibers.

To summarize the factors associated with age-related muscle atrophy, it should be remembered that changes are highly variable from person to person, as well as between different muscle groups. It also appears that the lower or hind limbs are affected to a greater extent and that the changes have features that resemble both neuropathic and myopathic alterations. One should also consider the fact that some of these changes that are observed in elderly skeletal muscle may be secondary to other external factors such as nutritional deficiencies, changes in endocrine status, and the lack of regular physical activity.

### **Normal Age-Related Alterations to Flexibility**

The primary anatomical structure responsible for flexibility, or mobility, is the joint. Joints become less stable and less mobile with increased age,<sup>18</sup> and the components of joints, cartilage, ligaments, tendons, and synovial fluid show structural and functional changes during the aging process. Alterations include an increase in the number of cross-links in collagen and elastin,<sup>19</sup> thickening of the basement membrane and changes in the ground substance containing tissue fluid known as hyaluronic acid, all of which alter the metabolic activities and increase the resistance of the connective tissue.<sup>20</sup> The end result is stiffer, more rigid tissues and the loss of joint flexibility.<sup>21</sup>

Generally, with age, synovial membranes become more fibrous and synovial fluid shows evidence of a decreased viscosity.<sup>20</sup> Normally, hyaluronic acid helps to regulate the viscosity of tissues. However, reduced secretion of hyaluronic acid can reduce the ease of joint movement and decrease joint flexibility.<sup>21</sup> Furthermore, the production of hyaluronic acid is enhanced with exercise; therefore any decrease in activity will negatively affect the production of hyaluronic acid, producing tissue restrictions and further decreasing mobility.<sup>22</sup>

The range of motion at a joint is specific to each joint and is dependent upon its anatomical structure and habitual movement patterns.<sup>23</sup> Degenerative changes can begin as early as the 3rd decade and usually occur most often in weight-bearing joints such as the ankles, hips, and lumbar spine. Joint range of motion is also influenced by the musculature as well as the soft tissue in the surrounding areas, and as a result, flexibility declines to varying degrees at different joints with increasing age. Perhaps one of the most serious implications, on a functional

level, with decreasing joint flexibility is the increased risk for falls in the elderly.<sup>24</sup>

### **Exercise Interventions for Improving Muscular Fitness and Flexibility**

#### **I. Muscle**

There is contradictory evidence in the literature concerning the potential for growth of aging skeletal muscle. In addition, there is very little information available concerning strength training in the aging female.<sup>25</sup> Biological differences in body composition and muscular strength between men and women generally are attributed to sex steroid hormones. Testosterone, the primary male sex steroid, has anabolic effects, which result in the development of lean body mass, particularly muscle tissue.<sup>26</sup> However, there is some controversy in the literature whether serum testosterone levels in healthy older men are lower than those observed in young men, and has resulted in some speculation that older men may only be less sensitive to the anabolic effects of testosterone.

Growth Hormone is an anterior pituitary hormone which promotes bone and muscle growth.<sup>26</sup> The anabolic effect of Growth Hormone on skeletal muscle may be mediated by other growth factors, such as Insulin-like Growth Factor-I (IGF-I), which is released from the liver and other tissues, and IGF-Binding Protein 3, which actually impedes transfer of the growth factors across the capillary endothelium and inhibit binding to receptors. There are limited data regarding the contribution of these hormones or how the ratio of these hormones to binding proteins influences muscular development following resistance training. These hormones may exert important physiological effects in the adaptation of skeletal muscle to chronic resistance exercise, particularly in females and in older individuals.

The older literature seems to indicate that weight training programs primarily resulted in strength gains due to neural facilitation in older males rather than increases in muscle size.<sup>27</sup> Conversely, recent studies provide evidence that gains in muscular strength for the older individual may be due to increases in muscle cross-sectional area.<sup>28</sup> Evans<sup>29</sup> reported that men as old as 96 years of age can increase muscle size through high-intensity resistance training and these findings have been substantiated by others.<sup>30</sup> Similarly, muscle hypertrophy induced by heavy resistance training has been documented

recently in older women.<sup>31</sup> Our laboratory has recently completed a 14-month weight training study (80% 1RM, 8 reps, 3 sets) with 1-7 year post-menopausal women and have observed significant strength improvements (13-53%) and concomitant increases in muscle size (19-38%).<sup>32</sup>

Testosterone responses to acute bouts of weight training exercise have been well documented in young males,<sup>33</sup> however, the effects for women are not as obvious.<sup>34</sup> Factors which influence testosterone responses include intensity of the exercise (% 1RM), exercise volume (muscle mass X repetitions X sets) and amount of muscle tissue used in the exercise protocol. Subject characteristics, such as differences in age, health status, and fitness levels also affect the testosterone responses to weight training exercise.

Generally, acute bouts of heavy resistance exercise induced increases in peripheral blood concentrations of testosterone in young males,<sup>35</sup> whereas low volume exercise utilizing small amounts of muscle mass did not result in increased serum testosterone levels.<sup>36</sup> Mechanisms for increased serum testosterone levels in response to acute exercise include: 1) hemoconcentration during heavy exercise; 2) a reduction in the clearance rate of testosterone from hepatic and extra-hepatic tissues; and 3) stimulation of beta receptors in the testes. The majority of studies have indicated that young women don't show significant increases in testosterone following acute bouts of training.<sup>37</sup>

In addition to acute responses, there are some data indicating that resting serum testosterone in young males increases as a chronic adaptation to a long term (two year) weight training program.<sup>38</sup> It was speculated that the prolonged strength training in these subjects influenced pituitary and hypothalamic function, resulting in increased serum testosterone levels.

Resting serum testosterone levels in young women were not affected by either short-term<sup>39</sup> or long-term<sup>40</sup> strength training programs. Despite the lack of testosterone response in women, initial resting serum testosterone levels were found to be positively related to trainability of muscle tissue during strength and power training programs. There is little data available that reports chronic endocrine changes following long-term weight training in the elderly.

In young male subjects, Growth Hormone has been shown to increase in response to acute weight training with the magnitude of the

response varying depending on the intensity and volume of the exercise sessions.<sup>41</sup> IGF-I has shown more variable responses to resistance exercise.<sup>42</sup> Fewer studies have investigated Growth Hormone and IGF-I responses to weight training in women. Kraemer and associates<sup>35</sup> compared Growth Hormone and IGF-I responses to acute weight training in young males and females performed at the same relative intensity. Growth Hormone and IGF-I significantly increased in both groups. There was no significant gender difference in Growth Hormone or IGF-I responses to exercise; however, females had significantly higher pre-exercise Growth Hormone levels than males. Similarly, Pyka et al<sup>41</sup> found no gender differences in Growth Hormone responses to acute weight training in young or old subjects.

It has been documented that resting levels of Growth Hormone and IGF-I are lower in older individuals.<sup>43</sup> Concerning exercise responses, a recent study found older male and female subjects did not show significant increases in serum Growth Hormone levels after acute weight lifting exercises at approximately 70% 1RM.<sup>41</sup> It was speculated that the attenuated Growth Hormone responses in the older subjects may limit their potential for hypertrophy from weight training programs.

As mentioned earlier, it was originally thought that elderly skeletal muscle could increase its force-producing capacity following training only through improved neural facilitation and neural coordination rather than an increase in muscle size. In one of the first studies to examine the potential for muscle hypertrophy in older men, Moritani and DeVries studied young and older men following eight weeks of progressive resistance training of their dominant elbow flexors.<sup>44</sup> They postulated that if strength was increased by neural factors, then there would be an increase in IEMG activity without any change in force per motor unit innervated. They reported significant increases in maximal strength in the trained arms of old and young men, but that neural factors played a major role in the strength gain throughout the entire training period in the case of the old subjects; however, in the case of the young subjects, it was reported that although the early changes in strength were mainly brought about by neural factors, hypertrophy became the dominant factors after four weeks of training.

In light of more sophisticated techniques and more demanding training protocols, recent studies all seem to agree that elderly skeletal muscle

is able to adapt to short term training programs by increasing strength through muscle hypertrophy. A 1988 study of resistance training of the legs of older men convincingly demonstrated that concomitant muscle enlargement, muscle fiber hypertrophy, and performance improvements can occur.<sup>45</sup> Frontera et al (1988) reported that men aged 60 to 72 years were able to increase their force producing capacity by 110 percent following a 12-week strength training program of the knee extensors.<sup>45</sup> The increase in performance was accompanied by increases in quadriceps area (9%) and increases in the cross-sectional area of both fiber types (Type I — 34% and Type II — 28%) in the vastus lateralis muscle.

It is also important to note whether the ultimate degree of muscle hypertrophy following training is age dependent. Welle et al (1996) reported that young 22- to 31-year-old males and females had significantly greater increases in CSAs of the elbow and knee flexors after three months of training when compared to the older 62- to 72-year-old group.<sup>46</sup> Elbow flexor CSA increased about 22 percent in the young compared to a 9 percent increase in the old, while the knee flexor CSA increased by 8 percent in the young and only 1 percent in the old. There were however, no significant age effects on the hypertrophic responses of the knee extensors. The training-induced increase in the specific tension of the elbow flexors and knee extensors, as measured by the ratio of the 3RM to maximal CSA, were not affected by age, but the older group had a significantly greater percentage increase in knee flexor specific tension. They concluded that even though there is some age effect on the responsiveness to exercise, this phenomena could not be generalized to all muscle groups.

Still, there is very little available information regarding the adaptability of elderly skeletal muscle to prolonged training periods. McCartney et al (1996) conducted a two-year randomized control trial of weight training in 113 male and female subjects aged 60 to 80 years.<sup>47</sup> The training program consisted of two sessions per week for a period of 42 weeks, followed by 10 weeks of testing and vacation time, and then another 42 weeks of training. Each session consisted of three sets of the exercises with 10-12 reps/set at 80% of 1RM. It was determined that males were significantly stronger than the females and the younger, 60- to 70-year-olds, were significantly stronger than the 70- to 80-year-olds. Also, strength continually increased over the entire two-year period with

no obvious plateau for all subjects.

In a recent publication by Pollock and Vincent, they examined the potential benefits of resistance training on the health status of individuals.<sup>48</sup> They suggest that programs consisting of eight to 10 exercises performed two to three times per week for one set of eight to 15 reps can improve many factors associated with good health. These factors include increased function and prevention of falls, decreased pain in chronic lower back pain patients, increased bone mineral density, improved body weight control, and an improved quality of life.

### **II. Flexibility**

Researchers have also demonstrated that flexibility in older populations can improve through the use of a properly designed program that emphasizes specific joint range of motion;<sup>49</sup> however, little carry-over is experienced in the surrounding musculature. On the other hand, it is well established that a strength training program can improve the force production characteristics of the lower extremities and trunk muscles for the support of posture and to aid in the control of balance.<sup>50</sup> What has not been evident is the potential for the concomitant improvement in joint flexibility following strength training.

As already mentioned, declines in strength and flexibility are an inevitable part of the aging process. However, only recently have these observations been linked to the increased risk for falls in the elderly.<sup>51</sup> Physiological declines in strength and flexibility associated with increased age are not only measurable, but also can be translated into decreased functional abilities. Conventional weight training programs can significantly improve muscular strength in very old institutionalized individuals.<sup>52</sup> However, not all older individuals have access to weight training machines or to supervised strength programs with conventional weights. Therefore, the possibility of improving strength and concomitantly, flexibility, with non-conventional resistance programs needs to be examined. One such study examined the use of Dynabands<sup>®</sup> on measures of strength and joint flexibility in a group of healthy sedentary, elderly women.<sup>53</sup> The resistance training program met three times per week for 16 weeks utilizing Dynabands<sup>®</sup> and each of eight exercises were performed for 10 to 15 repetitions.

Laboratory measures of strength improved between 1.5 and 25.2 percent depending on the muscle group being assessed. Concerning the carry-over effect on joint flexibility, there was a

small decrease of about 3 percent in shoulder flexion and small, nonsignificant improvements of about 8 percent for shoulder extension, 5 percent for shoulder transverse extension, 2.1 percent for hip flexion, and 5.2 percent for hip rotation. The two statistically significant improvements in joint flexibility occurred at the ankle with a 21 percent improvement in dorsiflexion and a 23 percent improvement in plantar flexion. It was concluded that a properly designed resistance program that used Dynabands<sup>®</sup> resulted in strength improvements as well as considerable improvements in flexibility, especially at the ankle.<sup>53</sup>

### **Exercise Programming, Testing and Evaluation**

It has been estimated that people over age 65 will increase to over 30 million by the year 2000 and will represent approximately 12.5 percent of the total population. It is therefore quite obvious that when these older individuals begin to think of engaging in some regular physical activity, there will be a wide spectrum of physical abilities and disabilities that will need special program considerations. Fitness experts will first need to distinguish between "young" old (those persons who seem little affected by their age and who continue with life long activities) and "old" old (those who are hindered or physically limited in their physical capacity) and then carefully balance the risks of physical activity with the risks of a sedentary lifestyle.

In general, if someone has been sedentary or has maintained very low activity levels and is over the age of 45 years, it is critical that these individuals consult with their physician and have some form of stress test prior to beginning any exercise program. The purpose of the stress test is to identify those individuals who are at high risk during moderately strenuous exercise and to establish an appropriate level of intensity at which exercise is to be pursued. Methods for testing the older adult are as varied as the methods for the younger adult; treadmill, bike, and step tests are most commonly used. One difference between young and old individuals when being tested is the older population may have a greatly reduced aerobic capacity, a limited ambulatory capacity, or some level of reduced neuromuscular function that may facilitate some modification to the particular assessment being used.

Once cleared for participation in an exercise program, the optimal frequency, intensity, duration, and mode of exercise depends, to a large

degree, on the individual. If the person has cardiovascular disorders, he or she should be limited to low exercise intensity and therefore need to increase exercise frequency and duration. If limited by neuromuscular problems, the person may be limited to modes of exercise such as swimming, walking, or stationary bike riding. Regardless of the exact program, the goals of any program should be to achieve an intensity that will insure cardiovascular and neuromuscular improvements, but at the same time minimize the risk of injury due to over exertion.

Young subjects show that improvements in fitness levels are minimal when the frequency of exercise participation is increased above three days/week or if the exercise is less than two days/week. Older subjects, on the other hand, will show improvements with exercise at two days/week but the tendency for a lower intensity and shorter durations suggests that exercise sessions of more than three days/week may be in order.<sup>54</sup> The mode of the exercise suggested by American College of Sports Medicine is any activity that uses large muscle groups that can be maintained continuously and is rhythmical and aerobic in nature. In fact, three recent publications in *Medicine and Science in Sports and Exercise* provide comprehensive reviews dealing with the issues of recommendations for cardiovascular screening, staffing, and emergency policies at health fitness facilities,<sup>55</sup> the recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness and flexibility in healthy adults,<sup>56</sup> and finally, exercise and physical activity recommendations for the older adult.<sup>57</sup>

**Summary**

Currently, the pathophysiology and the progression of sarcopenia are poorly understood and thus interventions to either prevent, retard or reverse this condition are extremely limited. Even though a few studies have noted relationships between age-related changes in skeletal muscle quality (i.e., mass, strength) with metabolic/physiological and functional impairments, the full magnitude of the potential public health problem it poses remains to be determined. With respect to functional impairments, it is generally agreed that muscle weakness and atrophy can contribute to gait problems, falls and ultimately to the loss of functional independence in the elderly. Still, very little is known about which age-related changes in specific muscle properties (i.e., mass, strength, torque development, etc.) significantly affect physical function and

performance (i.e., walking, maintaining balance, etc.). The extent to which metabolic/endocrine changes can be attributed solely to age-related loss of muscle mass or to complex changes in body composition (i.e., fat, water, mineral, protein) remains to be established. Also, it is somewhat controversial as to whether sarcopenia can lead to other health consequences such as osteoporosis and impaired thermoregulation. Therefore, clarification, through quantitative assessments of the inter-relationships between muscle mass/quality, endocrine status, and functional consequences are essential if we are to develop new approaches for diagnosis, provide insight into the underlying mechanisms, and ultimately for the development of effective interventions for sarcopenia.

A primary concern that any health professional must be aware of is for participants to enjoy the activity they have been encouraged to participate in. Also, in order to minimize the risk of injury, age and ability level should dictate the mode of exercise for the individual or group and the exercise leader must consider the interests of the participants if the program is to be successful. The goals for each individual should be defined at the beginning of the program to point out the positive changes that result from the exercise. The program leader must also consider the social and psychological needs of the participants and develop programs to maximize positive social contact and minimize negative competitive feelings and personality conflicts. And finally, programs are generally more successful if the facilities are close to the exercise population and if friends and spouses are encouraged to participate. □

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## **Intramuscular Hemangioma: A Benign Tumor Masquerading as Malignant Soft Tissue Tumor. Report of Two Cases.**

Chittranjan Verna, MD; Kyung-Whan Min, MD

We report two cases of intramuscular hemangiomas, one arising from the left flank region of a 33-year-old female, and another from the mid right back of a 25-year-old man. In both cases the tumor masqueraded as malignancy and required a biopsy for correct diagnosis.

Intramuscular hemangioma is a benign vascular tumor. Its tendency to deep location, infiltrative border, and fixity to surrounding tissues may cause it to be confused with malignant soft tissue tumors. Preoperative biopsy of the lesion is advised, and histopathologic examination is the only way to make a definitive diagnosis. Wide excision of the lesion is the treatment of choice. Follow up is required for any late recurrences.

### **Introduction**

Intramuscular hemangioma is a benign vascular neoplasm of the striated muscles. The first example of a hemangioma arising from semi-membranous muscle was described by Liston in 1843.<sup>1</sup> Later, Angervall et al 1968 described the lesion as an arteriovenous vascular malformation involving striated muscle.<sup>2</sup> In the past it has been called angioliipoma,<sup>3</sup> or infiltrating angioliipoma,<sup>4</sup> due to the presence of vascular lipomatous stroma and the infiltrating behavior of this tumor.

Intramuscular hemangioma incidence is less than one percent of all hemangiomas. It commonly involves the trunk and extremities, probably due to the larger bulk of skeletal muscle in these areas. Most commonly it occurs in the lower extremities of young adults less than 30 years old, without any sex predilection.<sup>3,5</sup> Thirteen and one-half percent of intramuscular hemangiomas occur in head and neck region,

and thus, they should be considered in the differential diagnosis of the head and neck masses.<sup>6</sup> When affecting deeper tissues, they present as an asymptomatic and slowly enlarging mass masquerading as malignant soft tissue tumors.

This study describes clinical, radiologic and pathologic data from two cases of intramuscular hemangiomas that presented considerable difficulties in diagnosis and management.

### **Case Reports**

#### **Case 1**

A 25-year-old man sought help for a slowly enlarging painless, fixed and spongy mass 6 cm in size in the right mid-back region which had been present for some years. He had a history of removal of a benign tumor of his right arm. The tumor in the right side of his back was immobile and fixed, suggesting a possibility of malignancy. A biopsy was performed, and a diagnosis of intramuscular hemangioma resulted. Subsequently the mass was excised, and microscopic examination confirmed the biopsy diagnosis.

Approximately two years after the surgery, the patient sought help for an unexplained 20 lb. weight loss and loss of appetite. He also complained of mid-abdominal discomfort, back pain and right hip pain, worse at night. A CT scan showed  $7 \times 4 \times 3$  cm mass involving the right intercoastal region, right pleura and the adjacent subcutaneous tissue at the site of previous incision. (Fig 1) And another mass  $15 \times 0.6 \times 8.3$  cm arising from the right iliopsoas region was found. Fine needle aspiration biopsy of the right flank lesion revealed a benign hemangioma identical to the previously resected specimen. A CT guided biopsy of the right

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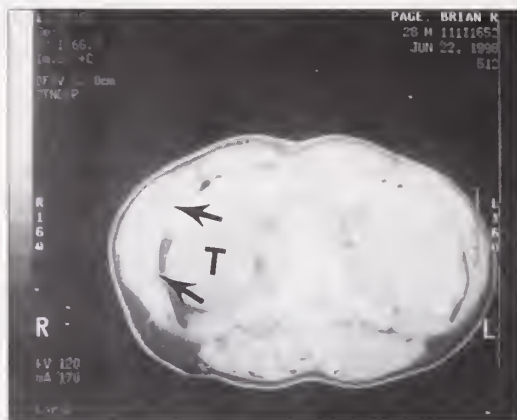


Figure 1. CT scan of the abdomen of Case 1 showing recurrent tumor in right posterolateral wall (arrow). Additional tumors were seen in the ipsilateral paraspinal area (T) and a smaller lesion in the opposite paraspinal muscle.

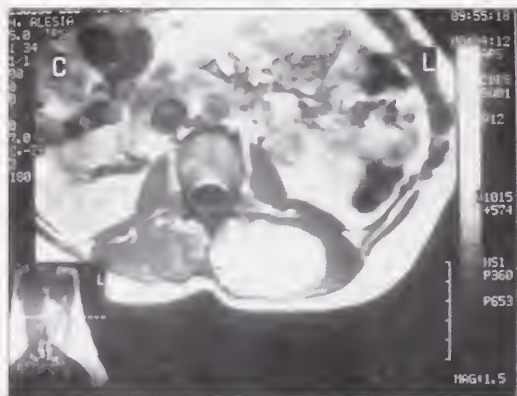


Figure 2. MRI of the abdomen of Case 2 showing a large T2 enhancing lesion in left paraspinal paraspinal muscle areas.

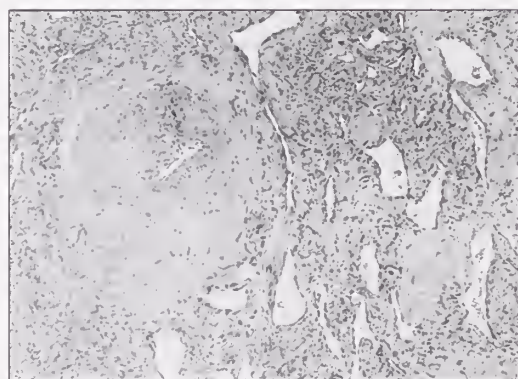


Figure 3. The center portion of intramuscular hemangioma, showing varying-sized vessels.

iliopsoas mass was attempted but failed to yield adequate tissue for diagnosis. The biopsy was abandoned due to the risk of excessive bleeding.

## Case 2

A 33-year-old woman presented with a five-year history of an asymptomatic, slowly enlarging left flank mass, thought to be a lipoma. Recently she had complained of back pain. Her physical examination revealed a 13 × 8 cm fixed mass in her left flank. A MRI study showed a 5.2 × 4 × 12 cm mass enclosed within the left posterior superficial paraspinal musculature, with central cystic degeneration. (Fig 2) An incidental small hemangioma of the body of L-4 vertebra was also found. The radiologist's impression was that of a malignant soft tissue tumor. An open biopsy of the left flank mass was performed, and a diagnosis of intramuscular hemangioma was established. The lesion was widely excised later. The patient has remained disease-free for 11 months after the resection.

## Pathology

The features of the pathology were identical in both cases. On gross examination, the tumors were fairly well circumscribed but not encapsulated. The cut surface was white to tan-pink with a variegated appearance.

Microscopically the tumors were composed of clustered, variably-sized vascular channels some having muscular media (Fig 3) and aggregates of thin walled capillaries around the larger feeder vessels. (Fig 4) The intervening stroma varied in appearance and composition, and was generally composed of loosely-arranged connective tissue with variable amount of fat cells. (Fig 5) Scattered through the tumor were single or multiple skeletal muscle cells with degenerative changes. The periphery of the tumor was not well defined. The density of the vessels tended to be less towards the periphery where widely dispersed single vessels were found. No delineated margin or capsule was present.

## Discussion

The clinicopathologic features of soft tissue tumors in two young adults presented herein are characteristic for intramuscular hemangioma.<sup>1</sup> Both tumors presented as deep-seated, large soft tissue masses. Their appearances in radiological imaging studies were suggestive of a mesenchymal malignancy. The open biopsies in both cases revealed vascular tumors composed of mixed large and small vessels within the mus-

cle, consistent with the diagnosis of intramuscular hemangioma.

Intramuscular hemangioma is a benign vascular tumor of skeletal muscle. It affects adolescents and young adults less than 30 years old.<sup>3,5</sup> The exact incidence of this tumor is difficult to determine, but it represents the most common hemangioma of deep soft tissue.<sup>5</sup> Thigh muscles are most commonly involved, followed by the muscles of the head and neck, which account for 13.5 percent of reported cases.<sup>6</sup>

Because of their deep location and infiltrative nature, they often attain considerable size and may present with a confusing clinical picture. Radiological imaging studies including CT scan and MRI (claimed to be helpful in making the diagnosis) failed to give a definitive diagnosis in these cases. Pathology examination was the only way to make a diagnosis in the index cases.

The frequency of the tumor in young individuals, often with a long history and the microscopic appearance of large vessels simulating an arteriovenous malformation, suggest that some of these tumors may be congenital tumors. In this regard, it is interesting to note that both of our patients presented with additional lesions on CT and MRI examinations. Although they were not confirmed by biopsy to be vascular tumors, they raise a diagnostic probability of angiomatosis (a congenital disease characterized by benign multiple vascular tumors involving multiple sites, including skeletal muscle). There are no distinguishing histopathologic features to separate these two conditions. Neither is there any difference in their clinical management.

Other differential diagnosis should include malignant vascular tumors, however, there was no cellular anaplasia, increased mitotic activity, or freely anastomosing sinusoidal pattern to suggest malignancy in our patients.

Intramuscular hemangiomas are benign vascular tumors that are best treated by wide local excision. The risk of recurrence ranges from 18 to 50 percent according to reported series. The tendency to recurrence of these tumors may be explained by their deep location and infiltrating border preventing adequate initial excision, as was possibly seen in our Case 1. Complete conservative excision is the treatment of choice for intramuscular hemangiomas. □

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At the time this manuscript was written, Chitranjan Verna, MD, was an extern in pathology at Deaconess Hospital in Oklahoma City. Kyung-Wan Min, MD, is a pathologist at Deaconess Hospital in Oklahoma City.

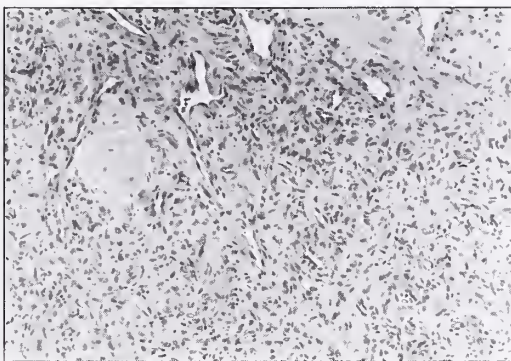


Figure 4. There were areas of tumor composed of aggregates of small vessels.

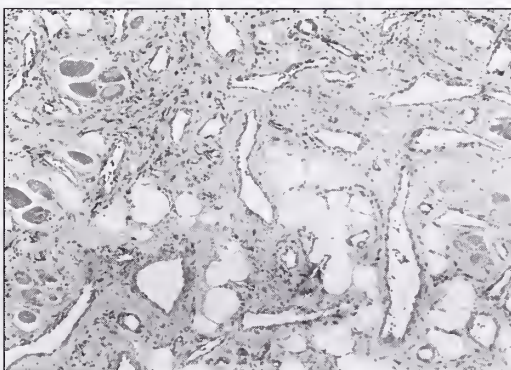


Figure 5. Intramuscular hemangioma showed scattered fat cells and skeletal muscle cells.

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## **34-Year-Old Man with History of Progressive Orthopnea and Exertional Dyspnea: A Clinicopathological Correlation Conference from the University of Oklahoma College of Medicine**

George Tardibono, MD; Max Walter, MD; Barry Gray, MD; Anna Sienko, MD

### **Case Presentation**

#### **George Tardibono, MD**

A 34-year-old male presented to University Hospital with a one-week history of progressive orthopnea and exertional dyspnea. At that time, his evaluation included a chest x-ray which showed cardiomegaly and bilateral pleural effusions. He was diagnosed with congestive heart failure after an echocardiogram revealed mildly decreased left ventricular function, a mildly enlarged left ventricle and antero-septal and basal segmental wall motion abnormalities. He was offered left heart catheterization but declined. Consequently, he was treated with ACE inhibitors and diuretics and released in improved condition.

Two weeks later, the patient returned with recurrence of symptoms. At that time, physical exam revealed a pale, jaundiced male with a blood pressure of 126/80, pulse 126/min, respiratory rate 26/min, temperature 37 C. His neck veins were distended and he had a regular rhythm with tachycardia. No murmurs or extra heart sounds were noted. He had decreased breath sounds in the bases with crackles. No hepatosplenomegaly was found. However, there was +3 distal pitting edema.

His laboratory evaluation revealed an elevated white count of 12,900 cells/ml, with neutrophilia and lymphopenia. He had mild anemia with hemoglobin of 10.6 gm/dl, MCV 79.9 fL, slightly elevated RDW and normal platelet count. Chemistry at that time was notable for potassium of 3.1 meq/L, serum bicarbonate 31 meq/L, glucose 154 g/dl, BUN 24g/dl and creatinine 1.3 gm/dl. His total protein was 5.8 g/dl and albumin

3.5 g/dl. His cholesterol was 125 mg/dl, calcium 8.4 mg/dl, and bilirubin 3.9 mg/dl with an elevated conjugated fraction. LDH was 300, but the rest of his LFTs were normal. Coagulation studies indicated a mild increase of the prothrombin time. Arterial blood gases on room air were remarkable for severe hypoxemia with  $pO_2$  of 50, pH of 7.56 and  $pCO_2$  36.

A chest x-ray on this admission revealed bilateral interstitial and alveolar changes with bilateral pleural effusions. His EKG was notable for sinus tachycardia with inferolateral ischemia based on T-wave inversion. He was admitted with a presumed diagnosis of heart failure. A thoracentesis resulted in good relief of symptoms. The fluid was grossly bloody and exudative in nature and had 1,590,000 red blood cells and 1,910 nucleated cells with a predominant neutrophilic component. Pathological examination of the fluid revealed phagocytosis of red blood cells by leukocytes and hemosiderin-laden macrophages. No malignant cells were seen and all cultures including mycobacteria were negative. A PPD was non-reactive. CT scan of the chest and abdomen revealed multiple pulmonary nodules with a large pleural effusion.

During his hospitalization, further lab work included an ANA titer of 1:40 with speckled pattern; sedimentation rate was 50 mm/h. His HIV, ANCA, and anti-glomerular basement membrane antibodies were all negative. His angiotensin converting enzyme level was also normal.

Two days into his hospitalization, the patient's respiratory symptoms returned and chest x-ray revealed reaccumulation of pleural effusions. Bronchoscopy was performed with

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normal endobronchial anatomy; no masses or obstructions were noted. Bronchialveolar lavage of the right middle lobe produced a bloody return. Both cultures and cytology were negative. A repeat therapeutic thoracocentesis was performed and once again, the fluid was bloody and exudative in nature.

Open lung biopsy was performed. The lungs were surrounded by two litres of bloody fluid. There were diffuse nodules throughout the lung parenchyma which appeared beefy red, thickened, and had intermittent patchy necrosis. The lung tissue was noted to be friable and hemorrhagic.

Following the procedure, the patient was unable to be extubated. He developed progressive organ failure with renal insufficiency and worsening hyperbilirubinemia, predominantly conjugated. He developed hypoalbuminemia, worsening anemia and thrombocytopenia. He remained afebrile, but his respiratory status progressively worsened with increased need for ventilatory support (FIO<sub>2</sub> of 100% and high PEEP). He was empirically started on intravenous corticosteroids and antibiotics. Two days later, fresh blood was noted in his endotracheal tube. A fibroptic bronchoscopy was performed without evidence of endobronchial hemorrhage. Shortly after this procedure, the patient developed cardiopulmonary arrest. Despite large doses of vasopressors and maximal ventilatory support, the patient's condition deteriorated and he died on the tenth hospital day.

**Question: How many days after the open lung biopsy did the patient die?**

**Answer:** Three days.

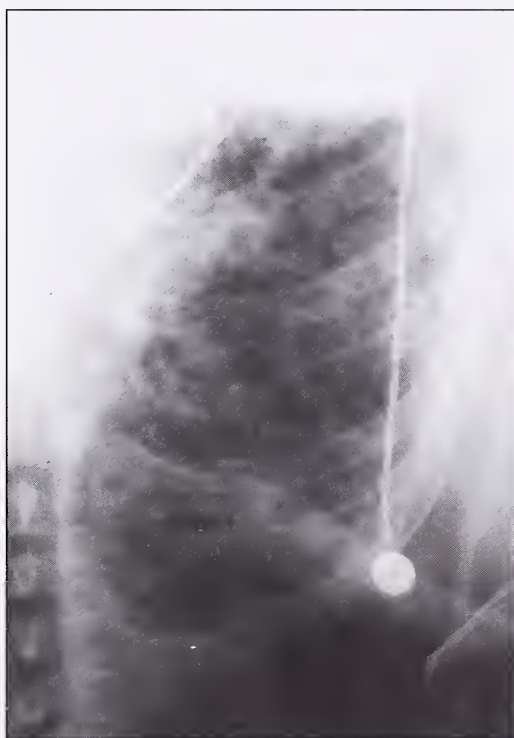
## Radiology

**Max Walter, MD**

This patient had one or more chest films for every day in the hospital. He had one CT examination performed on the second day of the second hospitalization. The admission chest film (Fig. 1) demonstrates a large heart in a large patient. The vascular pedicle is mildly prominent, but the central pulmonary arteries are not very prominent. A magnification view of the right lung showed multiple pulmonary nodules varying in size from 3 mm to 10 mm. (Fig. 2) They had a soft, ill-defined appearance. Close inspection of the left lung showed the same findings. The initial interpretation mentioned the possibility of metastatic disease. Other possibilities include pulmonary hemorrhage, pneumonia, and septic emboli. Most of the subsequent chest films showed much the same find-



**Figure 1.** Admission chest film of a large heart in a large patient.



**Figure 2.** Right lung showing multiple pulmonary nodules.

ings, except that the interpretations mention the possibility of congestive heart failure.

A careful review of the films failed to find much evidence for congestive heart failure. There were no areas of consolidation, no air bronchograms, and no evidence for interstitial changes that one expects in congestive heart failure. Towards the end of the second hospitalization, the chest films did begin to show some coalition of the nodules and the bilateral pleural effusions increased in size. The basic findings on all of the films did not change.

**Table 1. Possible Causes of Diffuse Alveolar Hemorrhage in this Patient****Systemic vasculitides**

1. Wegener's granulomatosis
2. Microscopic polyangiitis (PAN)
3. Churg-Strouss syndrome

**Collagen vascular diseases**

4. Systemic lupus erythematosus
5. Mixed connective tissue disease
6. Antiphospholipid antibody syndrome

**Cardiopulmonary diseases**

7. Mitral stenosis
8. Multiple pulmonary embolism
9. Infective endocarditis

**Other**

10. Goodpasture's syndrome
11. Crack cocaine inhalation
12. Pulmonary capillary hemangiomatosis

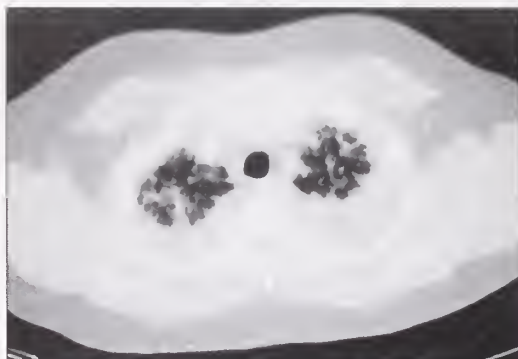


Figure 3.

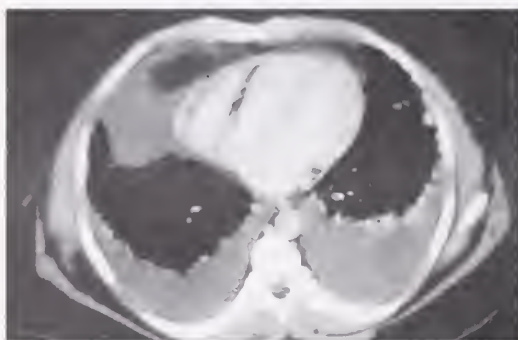


Figure 4.

Fig. 3 & 4: Lung windows showing multiple pulmonary nodules of variable sizes.

The CT examination showed a normal abdomen and pelvis. In the chest, there were large bilateral pleural effusions occupying about 50 percent of the pleural cavities. The lung windows showed multiple pulmonary nodules of variable size from 3 mm to 10 mm. (Fig. 3 & 4) The irregular borders of the lungs demonstrated that the nodules were also subpleural. There was no evidence for congestive heart failure. The differential diagnosis was extensive and included metastatic tumor and primary lung tumor (not squamous cell, small cell or non-small cell carcinoma).

Conceivably, a viral disease or histiocytic lymphoma might cause this appearance. Having had the opportunity to review all of the films and the CT, I believe this individual had a neoplasm.

**Discussion**

**Barry A. Gray, MD**

**Major clinical findings**

There are seven major features of the clinical presentation which need to be defined and clarified before considering the differential diagnosis.

1. Cardiac symptoms and findings
2. Anemia, microcytosis, anisocytosis
3. Pulmonary hemorrhage
4. Bloody pleural effusions
5. Pulmonary nodules
6. Conjugated hyperbilirubinemia
7. Rapid deterioration with multiple organ system failure

**Cardiac symptoms and findings**

The first question I would ask is, "Was there truly left ventricular failure?" Dr. Walter already suggested that the x-ray wasn't characteristic of left ventricular failure. The echocardiograph findings only showed mildly decreased LV function and enlargement. The patient definitely had symptoms that we usually attribute to left ventricular failure — orthopnea and dyspnea on exertion — but one has to recognize that these symptoms could be the result of the patient's intrinsic lung disease or bilateral pleural effusions. The bilateral pleural effusions could have resulted from congestive heart failure but examination of the fluid makes it clear that these were exudative rather than the transudates seen in congestive heart failure. So the evidence for left ventricular failure is relatively weak. On the other hand, the patient did have prominent neck veins and was described as having +3 pitting edema with a normal albumin. These findings indicate that there was right ventricular failure.

cor pulmonale, due to pulmonary hypertension and right ventricular overload.

Was there cardiomyopathy? In order to make a diagnosis of cardiomyopathy one must be able to exclude valvular heart disease, ischemic heart disease, congenital heart disease and pulmonary heart disease. While the first three could probably be excluded by the electrocardiograph findings, you cannot exclude pulmonary heart disease. So one can't make a diagnosis of cardiomyopathy. The other question is, "Was there an active myocarditis?" If there were, this might suggest a vasculitis, granulomatous disease or some type of autoimmune or infectious disease. Diseases such as Wegener's granulomatosis, periarteritis nodosa and systemic lupus erythematosus are known to cause myocarditis. The CPK was normal, but this does not completely exclude the diagnosis. The CPK may only be elevated in the early stages of myocarditis when there is myocardial necrosis,<sup>1</sup> so the absence of a CPK elevation doesn't eliminate this possibility. Nevertheless, I think that the evidence for myocarditis is slim since there is no evidence for intrinsic cardiac dysfunction.

#### **Anemia, microcytosis, and anisocytosis**

What was the nature of the anemia? Was this iron deficiency anemia? There was microcytosis with MCV equal to 79.9 and anisocytosis with increased RDW, but hypochromia was borderline with MCHC equal to 32.8. Iron deficiency anemia is common in chronic pulmonary hemorrhage. The alternative possibility is that this is the anemia of chronic inflammation. This anemia has similar indices. It can develop three to four weeks into an inflammatory disease. About the only way to separate these two possibilities would be with measurement of serum iron and total iron binding capacity, which we don't have. So the anemia doesn't seem to be of any diagnostic help.

#### **Pulmonary hemorrhage**

More than 30 percent of patients with diffuse alveolar hemorrhage syndromes do not present with hemoptysis, but they all have hemorrhagic fluid on bronchoalveolar lavage when they undergo bronchoscopy. These patients also have falling hemoglobin levels and the radiology is usually described as patchy or diffuse alveolar opacities. The nodules which Dr. Walter showed us are probably not patchy or diffuse alveolar opacities. These nodular densities probably represent another aspect of the underlying disease process.

The recognition of diffuse alveolar hemor-

**Table 2. Laboratory Abnormalities as Useful Clues to Etiology of Alveolar Hemorrhage.**

1. CBC will usually show eosinophilia greater than 10 percent in patients with Churg-Strauss syndrome.
2. Coagulation abnormalities: a prolonged PTT would suggest anti-phospholipid antibody syndrome (APS). However, anti-phospholipid syndrome due to anticardiolipin antibodies can be present with a normal PTT. However, APS is much less likely to produce severe thrombotic complications when the PTT is normal. Although coagulation studies revealed a mild increase in the PT, the PTT was normal, so we will eliminate anti-phospholipid antibody syndrome at this point.
3. Azotemia would be a clue to the presence of renal abnormalities and make this a pulmonary-renal syndrome, but this patient's BUN and creatinine were 23 and 1.3. The American College of Rheumatology (ACR)<sup>2</sup> has established BUN > 40 or creatinine > 1.5 as the criteria for renal involvement in systemic vasculitides.
4. Urinalysis demonstrating hematuria, casts, or proteinuria would raise the possibility of glomerulonephritis. This patient's urinalysis at the time of presentation was normal.
5. Blood cultures, if positive, would point to bacterial endocarditis, which can produce alveolar hemorrhage. Of course, bacterial endocarditis can be culture-negative, but if bacterial endocarditis were the etiology for the pulmonary findings, we are dealing with septic emboli to the lung from the right heart and I would have expected the blood cultures to be positive.
6. Drug screening can be useful since crack cocaine inhalation can produce diffuse alveolar hemorrhage. I understand from Dr. Tardibono that there was no history of recreational or illicit drug use.
7. Serologic test which can be useful in the evaluation of patients with alveolar hemorrhage include:
  - a) Antineutrophil cytoplasmic antibodies (ANCA), which are present in Wegener's granulomatosis, Churg-Strauss syndrome, and microscopic polyangiitis<sup>3</sup>
  - b) Anti-glomerular basement membrane (anti-GBM) antibodies which are diagnostic of Goodpasture's syndrome
  - c) Anti-nuclear antibodies (ANA) which can be diagnostic for systemic lupus erythematosus (SLE).

**Table 3. Pleural Effusions in Diffuse Alveolar Hemorrhage Syndromes**

| Disease                             | Present | Description            |
|-------------------------------------|---------|------------------------|
| Pulmonary embolism                  | 35-50%  | Exudative, bloody      |
| Wegener's granulomatosis            | 20-50%  | Small, serosanguineous |
| Churg-Strauss syndrome              | 30%     | Eosinophilic, bloody   |
| SLE                                 | yes     | Small, not bloody      |
| Goodpasture's syndrome              | Rare    | 2nd to complications   |
| Microscopic (PAN)                   | Rare    | 2nd to complications   |
| Pulmonary capillary hemangiomatosis | yes     | Bloody                 |

rhage syndrome does not narrow the diagnostic possibilities. There are more than 35 different diseases and syndromes which can produce this process. Many of the diseases or syndromes which can produce diffuse alveolar hemorrhage require the presence of definitive findings in other organ systems unrelated to the lungs or pre-existing diagnoses. Because of the absence of either, I have eliminated a number of these syndromes and

disease processes and will focus on those 12 etiologies which might fit the clinical presentation in this patient. Referencing Table 1, of these 12 possibilities, mitral stenosis is effectively eliminated by the echocardiographic findings. So we will exclude it from further discussion.

Table 2 lists laboratory abnormalities which can be useful clues to the etiology of alveolar hemorrhage. The negative serologic findings in this patient require that we consider the sensitivity and negative predictive values of these various tests.

Cytoplasm staining ANCA (C-ANCA) are present in Wegener's granulomatosis and the sensitivity is said to be somewhere between 60 to 90 percent.<sup>4</sup> That would mean the negative predictive value would be somewhere between 60 to 90 percent. However, with Wegener's limited to the lung, the negative predictive value for an ANCA test may be as low as 28 percent,<sup>5</sup> so we cannot exclude Wegener's on the basis of a negative ANCA.

Perinuclear ANCA (P-ANCA) is present in Churg-Strauss syndrome. The sensitivity and negative predictive values for P-ANCA are approximately 70 percent.

In microscopic polyangiitis, a variant of polyarteritis nodosa which affects primarily the small blood vessels, either P-ANCA or C-ANCA can be present,<sup>3,6</sup> and again the negative predictive value is around 70 percent.

Anti-glomerular basement membrane antibodies are present in Goodpasture's syndrome, but approximately 50 percent of the patients who are eventually demonstrated to have Goodpasture's have circulating anti-GBM antibodies. When Goodpasture's is confined to the lung, a much higher percentage of patients will not have circulating anti-GBM antibodies.<sup>7</sup>

Finally, it is noted that this patient had anti-nuclear antibodies, but the titer was only 1:40. Positive ANA with titer equal to 1:40 may be found in 32 percent of the normal population and is of no diagnostic significance.<sup>8</sup> To suggest a diagnosis of systemic lupus erythematosus requires an ANA titer 1:160. When present along with clinical findings, it has a 99-percent sensitivity for SLE.<sup>9</sup>

### ***Bloody pleural effusions***

The pleural effusions in this patient were described as large, bilateral, exudative, and hemorrhagic. The phagocytosis of red cells and leukocytes was described on the microscopic examination. The significance of this finding is unclear. Did this patient have in vivo LE prep in his pleural fluid? The characteristics of pleural

effusions in patients with diffuse alveolar hemorrhage syndromes are listed in Table 3.

The presence of bilateral large, bloody, pleural effusions tends to make many of the diseases which can cause diffuse alveolar hemorrhage unlikely. These include Wegener's granulomatosis,<sup>10,11</sup> Churg-Strauss syndrome, systemic lupus erythematosus, Goodpasture's syndrome,<sup>12</sup> and microscopic polyarteritis. That leaves only pulmonary thromboembolism and pulmonary capillary hemangiomatosis that would fit with the type of pleural effusions present in this patient. Even in pulmonary thromboembolism, bilateral effusions are relatively uncommon.<sup>13</sup>

### ***Pulmonary nodules***

Both the plain films and computerized tomography demonstrate peripheral nodules. If these are truly nodules, this would point the diagnosis towards Churg-Strauss syndrome, or allergic angiitis and granulomatosis, which frequently has pulmonary nodules. If there was cavitation in the nodules, this would suggest Wegener's granulomatosis. On the other hand, Dr. Walter has indicated that these "nodules" do not have the typical appearance of a granulomatous process where he would have expected many more little nodules, so it is difficult to make a case for Churg-Strauss or Wegener's on the basis of radiographic findings. Could these nodules represent patchy alveolar infiltrates? We are told by Dr. Walter that this is not the case. The other possibility is that these nodules represent multiple small pulmonary infarctions due to pulmonary embolic disease.

### ***Conjugated hyperbilirubinemia***

The elevation in conjugated bilirubin is difficult for me to explain. The SGOT, SGPT and alkaline phosphatase were reported as normal. The normal transaminases tend to exclude hepato-cellular injury and the normal alkaline phosphatase tends to exclude extrahepatic biliary obstruction. Elevation in conjugated bilirubin with normal liver enzymes can occur in patients with chronic cirrhosis in the setting of stress. It also can be seen in sepsis. It can also be the primary manifestation of two inheritable disorders, the Rotor and the Dubin-Johnson syndromes. If the increase in bilirubin occurred as a result of pigment overload due to the breakdown of large numbers of red cells in the alveolar and pleural spaces, there should have been an increase in unconjugated bilirubin. If the increase in bilirubin occurred as a result of low cardiac output and passive congestion, there should have been eleva-

tions of both the direct- and indirect-reacting bilirubin, as well as serum transaminase concentrations. I can not attach any diagnostic significance to the elevation in conjugated bilirubin.

### ***Rapid deterioration with multiple organ system failure***

After the lung biopsy, the patient experienced rapid deterioration with multiple organ system involvement over the course of several days and then expired. Patients with systemic lupus erythematosus, vasculitis, anti-GBM antibody disease, and Wegener's granulomatosis can have a very high early mortality with rates ranging from 25 to 50 percent, but in my experience, most patients with vasculitis or collagen vascular disease don't die this rapidly. Instead, they die of the complications of immunosuppressive treatment or the complications of prolonged ventilatory support. Patients with cardiomyopathy can die rapidly of arrhythmias, but I don't think that is what happened in this case. Sudden arrhythmias would not explain the multiple organ system failure. Patients with multiple recurrent pulmonary embolism can die rapidly of cardio-respiratory failure despite all heroic measures and I think the patient's final three days would point me toward this diagnosis.

### **Differential Diagnosis**

Finally, let us consider the possible diagnoses for this patient and the clinical features of the presentation which would favor or refute each of them.

#### ***Goodpasture's Syndrome***

Typically, patients with Goodpasture's syndrome have alveolar hemorrhage and rapidly progressive glomerulonephritis with antibodies directed against an antigen in the glomerular basement membrane (anti-GBM). The variable presence of pulmonary disease appears to depend on underlying lung injury, which allows these antibodies access to the alveolar basement membrane. The urinalysis usually shows proteinuria and a sediment with red cells, white cells, and red cell and granular casts. Goodpasture's syndrome can rarely present as alveolar hemorrhage without glomerulonephritis.<sup>7</sup> There are three features of the presentation which make this diagnosis unlikely: 1) normal urine analysis, 2) negative anti-GBM antibodies, 3) pleural effusions are uncommon. The normal urinalysis would be unusual in typical Goodpasture's syndrome with glomerulonephritis, but does not exclude Goodpasture's con-

fined to the lung. The absence of circulating anti-GBM antibodies does not completely exclude the diagnosis since up to 50 percent of the patients can have no circulating anti-GBM antibodies. If Goodpasture's syndrome is confined to the lung, circulating anti-GBM is usually absent and demonstration of linear IgG deposition along the pulmonary capillary basement membranes is the only way to establish the diagnosis.<sup>7</sup> Finally, pleural effusions are uncommon in Goodpasture's syndrome and usually occur only as a result of complications.<sup>12</sup> In this patient, large bilateral pleural effusions were a significant feature of the presentation. While I can't exclude Goodpasture's syndrome confined to the lung, I don't think there is anything to support this diagnosis.

#### ***Systemic Lupus Erythematosus***

Many patients with SLE show signs of pulmonary involvement. Pleurisy, coughing, and/or dyspnea may be the first symptoms of lung involvement. Pleural effusions in SLE are usually small or moderate, but large effusions have been described. Effusions are often bilateral. Low pleural fluid complement levels are characteristic of lupus effusions. Acute pneumonitis characterized by diffuse alveolar infiltrates in the lower lung fields are seen on radiologic examination. The corresponding findings on histologic examination include alveolar hemorrhage, edema, and hyaline membrane formation. Although alveolar hemorrhage may be the presenting manifestation of SLE, it is most commonly observed in those who are already known to have the diagnosis.<sup>14</sup> Although SLE is usually diagnosed on the basis of one or more of the symptom complexes which satisfy the American Rheumatologic Association (ARA) criteria,<sup>15,16</sup> it is important to recognize that patients can present with only monosystem disease. The presence of abnormal serologic tests only helps to solidify the diagnosis. There are four features of the presentation which make SLE unlikely: 1) pleuritis is not uncommon, but grossly bloody fluid is unusual, 2) pulmonary nodules are unusual, 3) absence of other clinical criteria for SLE, 4) ANA was only 1:40 with speckled pattern.

Although the pulmonary aspects of the presentation are uncharacteristic for SLE, the most compelling evidence is the absence of other clinical findings to support the diagnosis. Of the 11 features necessary for the diagnosis of SLE by ARA criteria, only one is present in this patient, pleuritis. There is no evidence of skin

involvement, oral or nasal ulcers, arthritis, renal disorder, neurologic abnormalities, hemolytic anemia, leukopenia, or thrombocytopenia. A positive ANA is defined when the titer is 1:160 or higher. Although a positive ANA has only a 20 to 35 percent positive predictive value, the negative predictive value is almost 100 percent. The probability of having SLE is less than 0.14 percent if the ANA test is negative.<sup>9</sup> Thus, although we can not completely exclude SLE, it would have to be diagnosed as possible SLE which is basically ANA-negative.

***Microscopic polyarteritis, the small vessel variant of polyarteritis nodosa***

Microscopic polyarteritis, which is the more common form of PAN in the lung, is a possibility.<sup>3</sup> However, again, patients with microscopic polyarteritis usually present with systemic symptoms and findings. Again, there are three features of the clinical presentation which make this diagnosis unlikely: 1) the absence of symptoms of a systemic disease, fatigue, weakness, fever, myalgias or arthralgias, 2) the absence of findings of multiple organ system involvement, weight loss, hypertension, renal insufficiency or suggestion of a polyneuropathy, 3) the absence of ANCA on laboratory examination.

The absence of clinical criteria carry a negative predictive value for polyarteritis of 82 percent<sup>2</sup> and the lack of serologic evidence adds a negative predictive value of about 70 percent. The combination of negative clinical and laboratory findings make this diagnosis very unlikely.

***Churg-Strauss syndrome, allergic angiitis and granulomatosis***

Three features of Churg-Strauss syndrome which might be compatible with the clinical presentation include: 1) heart failure due to cardiomyopathy is seen in 47 percent of patients with Churg-Strauss syndrome, 2) pulmonary nodules without cavitation are a frequent finding, 3) pleural effusions occur in 30 percent of patients.

On the negative side, there are six aspects of the clinical presentation which tend to make the Churg-Strauss syndrome less likely: 1) the radiologic studies and echocardiography do not support the diagnosis of CHF, 2) peripheral blood eosinophilia was absent, 3) pleural effusions did not contain eosinophils, 4) bronchoalveolar lavage did not reveal eosinophils, 5) negative ANCA, 6) no clinical evidence of asthma or neuropathy.

The criteria to diagnose Churg-Strauss syndrome include asthma, peripheral eosinophilia,

neuropathy, paranasal sinus disease, migratory pulmonary infiltrates, and biopsy demonstrating eosinophilic vasculitis. The presence of four criteria have sensitivity of 85 percent.<sup>17</sup> Thus, the diagnosis is highly unlikely based on clinical findings, and the negative predictive value of ANCA is about 70 percent. This would make me tend to exclude Churg-Strauss syndrome.

***Wegener's Granulomatosis***

Wegener's granulomatosis should always be considered in a patient with pulmonary hemorrhage. There are four clinical criteria proposed by the American College of Rheumatology for diagnosis: 1) nasal or oral inflammation, 2) chest radiograph showing nodules or cavities, 3) abnormal urinary sediment, 4) granulomatous inflammation on biopsy of an artery or perivascular area.

The presence of two or more of these four criteria yields a diagnostic sensitivity of 88 percent and a specificity of 92 percent.<sup>18</sup>

Other findings which might fit the clinical presentation of this patient include pleural effusions and possible myocardial involvement. However, pleural effusions are usually small and serosanguineous in contrast to the large bilateral bloody effusions which were present. In Wegener's granulomatosis, myocardial involvement presents as pericarditis or myocarditis and, as already discussed, there is little evidence for either in this patient.

Of the four clinical criteria used to make the diagnosis of Wegener's, this patient had only one, nodules on the chest x-ray. He had no evidence of nasal or oral inflammation. His urinary sediment was normal. The absence of clinical findings tends to exclude Wegener's. In addition to the absence of clinical findings, the negative ANCA is further evidence against this diagnosis. However, as already discussed, the negative predictive value of ANCA is not very great, especially if this were the form of Wegener's limited to the respiratory system.

***Pulmonary capillary hemangiomatosis***

Pulmonary capillary hemangiomatosis is an extremely rare vascular neoplasm in which there are great sheets of delicate blood vessels, like capillaries, that spread throughout the lung.<sup>19</sup> They involve the airways and the larger blood vessels. There is obstruction in the pulmonary venules which causes capillary distention and alveolar hemorrhage. When the vessels of the visceral pleura are involved, the same veno-occlusive process produces hemorrhagic pleural

effusions which may be large. In both the alveolar and pleural spaces, the extravasated red cells are engulfed by macrophages and there can often be an intense reaction that appears like a giant cell reaction. The existence of pulmonary hypertension is usually demonstrated by pathologic findings which include medial hypertrophy of the small vessels.<sup>19</sup> The chest x-ray is described as showing diffuse interstitial disease, not nodules.

Patients with pulmonary capillary hemangiomatosis may present with respiratory insufficiency, hemoptysis, and hemothorax, as well as findings of pulmonary hypertension. The differential diagnosis in patients with pulmonary capillary hemangiomatosis often includes fibrosing alveolitis, plexogenic pulmonary arteriopathy, recurrent pulmonary embolism, or pulmonary veno-occlusive disease. Short of a histologic diagnosis, pulmonary angiography is the only way to make the diagnosis. The pulmonary angiogram has a unique appearance in pulmonary capillary hemangiomatosis with areas of increased vascularity at the lung periphery. From the information presented in the clinical protocol, there is no way to exclude this diagnosis other than its relative obscurity.

### ***Multiple Recurrent Pulmonary Embolism with Infarction***

It is nearly impossible to make the diagnosis of pulmonary embolism (PE) on the basis of clinical findings alone. Therefore, one has to have a high level of suspicion when there are a constellation of signs and symptoms compatible with PE. Five features of this patient's illness should raise suspicion for PE:

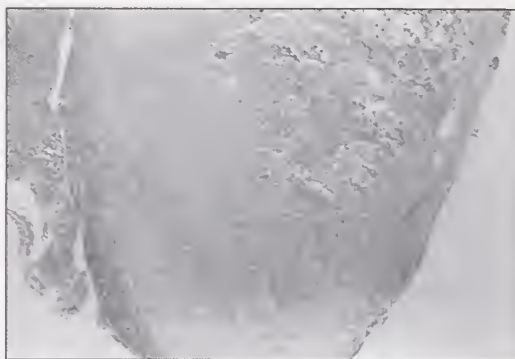
1. **Dyspnea:** Although dyspnea was the most common symptom, present in 73 percent of patients proven to have PE in the recent Prospective Investigation of Pulmonary Embolism Diagnosis (PIOPED) study,<sup>20</sup> it is very non-specific and was present with equal frequency in the patients without PE.
2. **Hemorrhagic pleural effusions:** Pleural effusion is a common finding which occurs in up to 50 percent of patients with PE<sup>13,20</sup> and PE is the fourth most common cause for pleural effusion.<sup>21</sup> Most often the pleural effusion associated with PE is small, unilateral, and rapidly resolving, but with pulmonary infarction the effusions tend to be larger and resolve more slowly.<sup>13</sup> Only five percent of effusions associated with PE are bilateral. The nature of the fluid is described as hemorrhagic or bloody in 65 percent of the pleur-

al effusions associated with PE. In patients with radiologic evidence of infarction, 88 percent of the effusions are hemorrhagic. Thus, some feel that a bloody effusion indicates infarction.<sup>22</sup>

3. **Alveolar hemorrhage:** Hemoptysis, though present, is not a common symptom in patients with PE. In the PIOPED study, hemoptysis was present in 13 percent of the patients proven to have PE.<sup>20</sup> Although usually attributed to infarction, there are observations to suggest that pulmonary hemorrhage can occur independently of infarction due to re-perfusion of ischemic lung tissue with bronchial blood at systemic arterial pressure.<sup>23</sup>
4. **Right ventricular failure with cardiomegaly:** As already discussed, the predominance of right-sided findings suggest that the cardiomegaly in this patient is the result of cor pulmonale with right ventricular failure rather than intrinsic cardiac disease. The history indicates that cardiomegaly had been present for at least two weeks before the final hospital admission. This would be consistent with chronic cor pulmonale due to recurrent, medium-sized emboli that fail to lyse. Acute cor pulmonale due to massive pulmonary embolism is a sudden terminal event. Most patients do not survive more than one hour.
5. **Cardio-respiratory failure as terminal event:** The refractory progression to complete cardio-respiratory failure with multiple organ system failure would be consistent with a low cardiac output state due to massive right ventricular overload at the time when the embolic burden produced nearly total occlusion of the pulmonary vascular bed.

The presenting laboratory abnormalities including leukocytosis, modest elevation in lactate dehydrogenase (LDH) and erythrocyte sedimentation rate, and mild coagulopathy suggest inflammation and cellular injury, but they are non-specific and do not exclude pulmonary embolism with infarction. The ECG findings of sinus tachycardia and inferolateral ST and T wave changes are also non-specific. Although precordial T wave inversion is more typical for right ventricular overload due to PE, non-specific changes were frequently observed in the PIOPED study.<sup>24</sup>

Aside from the pleural effusions, the radiographic findings are not typical of PE. The major findings on both the plain film and computerized tomography in this patient were mul-



**Figure 5. Lung section showing tumor nodule (compact solid area) (10X)**

multiple peripheral nodules. These nodules were atypical for granulomatous disease because they were too few and too large. The typical radiographic findings in PE are atelectasis or pulmonary parenchymal infiltrates.<sup>24</sup> If infiltrates represent infarction,<sup>13</sup> the peripheral nodules seen in this patient indicate obstruction of distal vessels by relatively small emboli. This would be consistent with the observations of Dalen et al<sup>23</sup> in patients with angiographic proof of PE. Pulmonary infarction was uncommon when emboli obstructed central arteries but frequent when distal arteries were occluded. The absence of air bronchograms in the lung is further evidence of pulmonary infarction as opposed to a primary alveolar process.

#### **My Clinical Diagnosis**

Given that the clinical and laboratory findings effectively exclude the inflammatory, vasculitic and collagen vascular etiologies for alveolar hemorrhage and bloody pleural effusion, the only diagnostic possibilities which can not be excluded are *multiple recurrent pulmonary embolism with infarction and pulmonary capillary hemangiomatosis*. While the former is relatively common, the latter is uncommon to the point of obscurity. However, the clinical findings with large, bilateral, bloody, pleural effusions, diffuse pulmonary hemorrhage, and multiple peripheral nodules representing pulmonary infarcts would be such an uncommon presentation for pulmonary thromboembolism that there would be no reason to favor one diagnosis over the other on the basis of relative frequency. Pulmonary angiography is the one diagnostic test which could distinguish between these two possibilities. As already mentioned, the pulmonary angiogram has a unique appearance in pulmonary capillary hemangiomatosis

with areas of increased vascularity at the lung periphery. With bilateral pleural effusions and widespread parenchymal abnormalities, the perfusion scan would be nearly impossible to interpret and angiography would be the procedure of choice to diagnose pulmonary embolism.

In the absence of further diagnostic testing, I would have to select multiple recurrent pulmonary embolism with infarction and cor pulmonale as the clinical diagnosis because it would be the most treatable of the two conditions and I would want to make sure that this disease was excluded before pursuing more exotic diagnoses.

#### **Question: Would you comment on bronchoalveolar carcinoma as a possibility?**

**Answer:** I have never seen a patient with bronchoalveolar cell carcinoma with alveolar hemorrhage. It is not on that long list of possible causes of alveolar hemorrhage. I have seen a report of bronchoalveolar cell carcinoma invading the blood vessels. These tumors, previously called intravascular bronchoalveolar tumor or IVBAT, are no longer thought to arise from epithelial cells and are now called Epithelioid Hemangioendothelioma. Eighty percent occur in women and the average age is 36. Fifty percent of the patients are asymptomatic. Alveolar hemorrhage and pleural effusions are rare.

#### **Pathology**

##### **Anna Sienko, MD**

Besides the autopsy pathology, this patient had a premortem surgical specimen that consisted of an open lung biopsy. I will start with that specimen first. The open lung biopsy consisted of a wedge of lung tissue submitted both for histology and immunofluorescence. The specimen was sectioned into multiple pieces and fresh tissue was submitted for immunofluorescence. The remainder was fixed in formalin. The immunofluorescence was negative. The biopsy stained with routine hematoxylin and eosin stains showed features of acute and chronic hemorrhage and a very poorly-differentiated neoplasm was seen in and around blood vessels.

The areas of hemorrhage in histological sections were more open and showed diffuse intra-alveolar hemorrhage with hemosiderin-laden macrophages. The areas of neoplasm were compact, with a nodular pattern and areas also demonstrating very small slit-like spaces. (Fig. 5) The nodules were composed of plump, round to oval cells with occasional spindle-shaped cells. The cells had abundant cytoplasm with

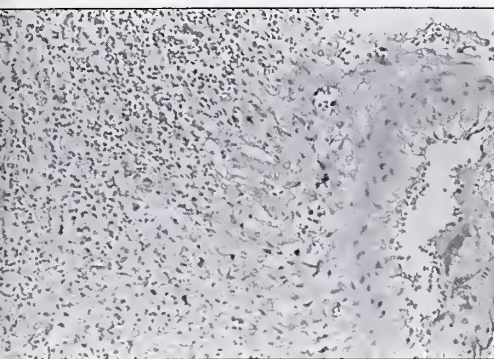


Figure 6. Tumor angiocentric with angiodestruction (20X)

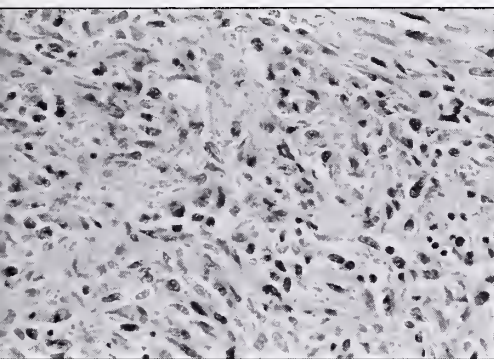


Figure 7. Tumor cells round, "plump" some spindle-shaped with brisk mitosis (40X)

leomorphic nuclei, prominent nucleoli and very brisk mitosis. These nodules were seen in an angiocentric distribution with angiodestruction. (Fig. 6 & 7)

A preliminary diagnosis of malignancy was communicated to the clinicians and a battery of special stains including immunoperoxidase was ordered. The working differential diagnosis was primary pulmonary malignancy vs metastatic tumor and included: 1) malignant fibrous histiocytoma (MFH), 2) hemangiopericytoma, 3) pulmonary lymphomatosis (angioendotheliomatosis), 4) metastatic germ cell tumor, and 5) angiosarcoma.

The special stains included an elastic stain and trichrome stain which showed vessel wall destruction. Stain for mucin was negative as was a stain for acid fast bacilli (performed to rule out infective etiology due to the nodular architecture).

The immunoperoxidase stains were all completely negative for LCA (leukocyte common antigen), L26 (B-cell marker), UCHL-1 (T-cell

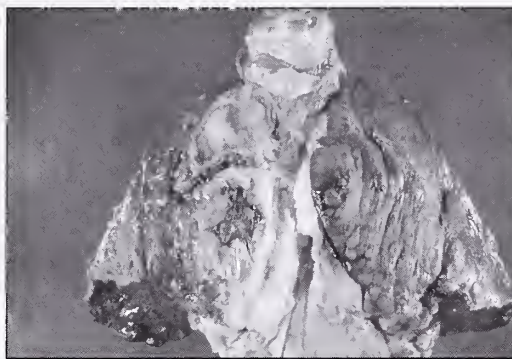


Figure 8. Lungs and pericardial tissues, en bloc anterior aspect (heart removed) showing protuberant nodules on lung surface bilaterally and soft tissue adhesions extending medially most marked on right side to include pericardial tissues

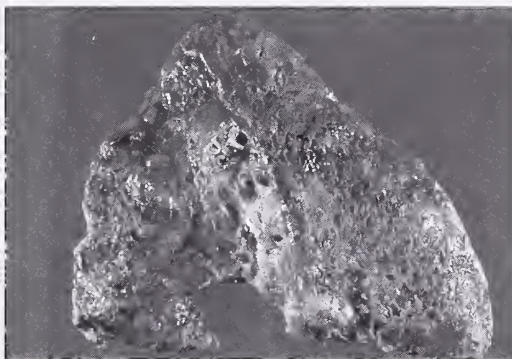


Figure 9. Left lung showing loss of normal anatomical markings with fibrinous adhesions and multiple dusty red protuberant nodules

marker), CD-3, CD-30 (Ki-1), CEA, EMA, AFP (alpha-fetoprotein), and B-HCG excluding from the diagnosis primary or metastatic lymphoma, carcinoma or a germ cell tumor. MFH can be excluded by histology as this tumor does not show angiocentric or angiodestructive features. Hemangiopericytoma can also be excluded as this tumor characteristically lays down a myxoid matrix, is composed of bland cells and is not a mitotically-active tumor. The immunoperoxidase stains that were positive were vimentin, which is positive in tumors of mesenchymal derivation but not specific, cytokeratin, which stained normal pulmonary cells but not the tumor cells, and CD-34, which was positive in areas that showed capillary proliferation of endothelial cells but negative in the malignant intravascular cells.

At autopsy, the most significant findings were seen in the internal exam and involved the lungs. The lungs were heavy (right lung — 950 gm, left lung — 1000 gm), beefy to dusky red, with diffuse, friable, hemorrhagic protuberant

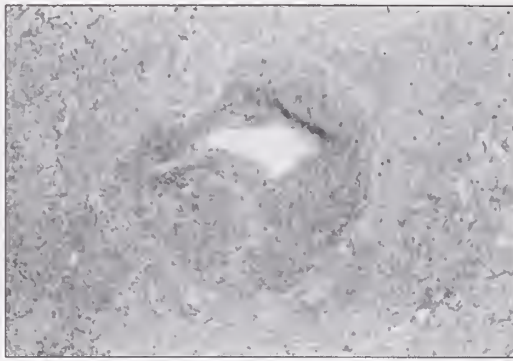


Figure 10. H&E of representative lung tissue section showing angiocentric angiodestructive tumor nodule (10X)

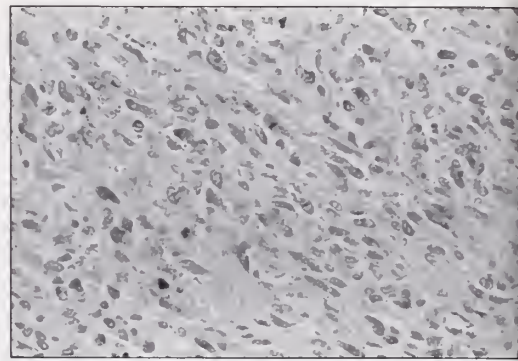


Figure 12. Immunoperoxidase stain CD34-tumor cells positive (40X)

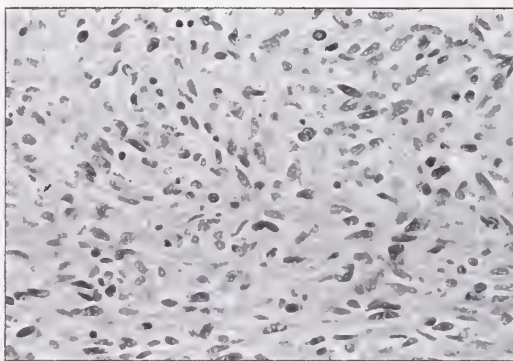


Figure 11. H&E tumor cells round "plump" abundant cytoplasm (epithelioid) with tiny slit-like spaces and brisk mitosis (40X)

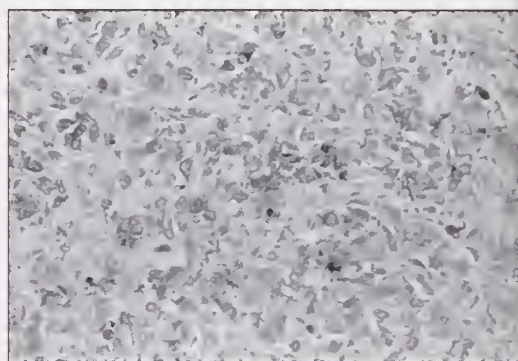


Figure 13. Immunoperoxidase Factor VIII-tumor cells crisp uniform diffuse positive staining (40X)

nodules. (Fig. 8 & 9) The same nodules diffusely involved contiguous soft tissues, predominantly on the right side extending medially to include the right pericardium. Extensive adherence to all of the pleural surfaces and diaphragm was present.

Histology of the lung tissue from both right and left lungs revealed a high grade tumor with angiocentric, angiodestructive features consistent with angiosarcoma. (Fig. 10) Autopsy sections were compared to the open lung biopsy material with histological features in both being identical. (Fig. 11) Sections from the adjacent soft tissues/adhesions and diaphragm showed similar histology. The heart was carefully examined grossly and multiple sections were examined microscopically. The only finding was that of a 0.5 cm nodule in the right atrium in the crista terminalis area which on histology showed tumor identical to that seen in the lungs and was interpreted as a metastatic focus. The pulmonary artery, its branches and the aorta were unremarkable; no masses or lesions were

appreciated. Additional stains performed on the lung sections and nodule in the right atrium were uniformly, crisply positive for Factor VIII, Ulex and a repeat CD 34, confirming a vascular origin. (Fig. 12 & 13)

As stated previously, primary angiosarcomas of the lungs are rare.<sup>25-27</sup> However, there are defined clinical settings where angiosarcomas are known to arise and include locations such as skin, subcutaneous tissues of the head and neck areas in elderly persons without predisposing factors.<sup>28-31</sup> Known predisposing factors that can give rise to angiosarcomas include lymphedema, irradiation or carcinogenic agents such as Thorotrast, arsenic compounds and vinyl chloride. It is also well established clinically that immunocompromised patients can develop Kaposi's sarcoma. Our patient did not fit into any of these scenarios. Given the patient's clinical history as provided, clinical and laboratory investigations which were all negative, the angiosarcoma was considered to be of lung primary.<sup>32,33</sup>

## The Authors

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# News

## Physicians Making a Difference in Local Communities

Across Oklahoma physicians are contributing their time and expertise to help others in need. In Tulsa, Everett Dunlap, MD, and other physicians provide medical care through Broken Arrow Neighbors, a program designed to provide "assistance with dignity" to residents facing difficult situations.

David Trent, MD, Ahmer Hussain, MD, and Ricardo Valbuena, MD, joined with local businesses in sponsoring the Latimer County General Hospital's Nurses Program booth at the Health Fair. The booth provided an opportunity for children to complete the SafeKids ID program. These physicians are just a few of the many dedicated professionals across the state that give of themselves to help others.

Other OSMA physicians receiving attention for their community involvement efforts include:

- ◆ Eldon Gibson, MD, serves as physician coordinator for the Shawnee Free Clinic, where 37 physicians volunteer their time. Dr. Gibson is a member of the Volunteer Health Center Advisory Board.
- ◆ David Reinecke, MD, Michael Babb, MD, Linda Hickman, MD, Alfonso Cardenas, MD, Michelle Kimmel, MD, and Tracy Pyles, MD, donate their time to the Cushing Care Clinic, a facility established to provide quality medical care to low-income families in the community.
- ◆ Robert Waddell, MD, Stephen Acker, MD, and William Noblet, MD, were presenters during a six-week seminar series on helpful interventions to improve quality of life for cancer patients. The series, called "I Can Cope," was held at Valley View Regional Hospital.
- ◆ Kersi J. Bharucha, MD, was the guest speaker at the September 26 meeting of the Ponca City Area Chapter of the American Parkinson's Disease Association.
- ◆ The Oklahoma Physicians Advisory Council (OPAC) was created to monitor treatment in workers' compensation cases; since the formation of the council, its physicians have also developed reasonable and practical guidelines for treatment of injuries. The goal of OPAC is to cut costs related to the treatment of injuries.
- ◆ William Tinker, MD, a cardiologist from Bartlesville, addressed the 9<sup>th</sup> Annual Diabetic Awareness Support Group in Pawhuska on Aug. 27.
- ◆ T.H. Boring, MD, participated with St. Joseph Physical Therapy in offering no-cost treatment to area male and female high school and college athletes on Saturday mornings during the fall.
- ◆ Martin Bautista, MD, presented at the Colon Cancer seminar held in July at Memorial Hospital of Texas County.
- ◆ Judith Blackwell, MD, addressed the Tulsa County Farm Bureau Women's Committee luncheon, presenting suggestions and advice on living a healthy life.
- ◆ Martin LeBeck, MD, has established a scholarship program for high school and college students interested in becoming medical doctors. The program is also designed as an incentive for returning doctors to the community by requiring that recipients do so and work for two or more years, depending on the amount of the scholarship.
- ◆ Jorge Gonzalez, MD, medical director of HealthSound Hospital, was a corporate sponsor of the Hispanic American Foundation's Noche de Gala dinner and dance, held at the Adam's Mark Hotel in Tulsa.
- ◆ Burt Chesley Montague, MD, serves as chair of the search committee for the Museum of the Great Plains. The committee is looking for a new director for the museum.
- ◆ Gary Wilson, MD, of Southwest Eye Institute, donated Laser Vision Correction Surgery for auction at the Second Annual Fellowship of Christian Athletes Benefit Auction.
- ◆ Donald Denmark, MD, of Integris Family Care Edmond, offered tips on helping children celebrate Halloween safely. The information was published in the *Daily Oklahoman*.

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**Marie Bernard, MD, Selected to Participate in U.S. Department of Veterans Affairs Project**

Marie Bernard, MD, chair of the Department of Geriatrics and professor of internal medicine in the OU College of Medicine, has been selected as one of 30 physicians nationwide to participate in the VA Faculty Leaders Project for Improved Care at the End of Life.

The project, launched by the U.S. Department of Veterans Affairs, is supported by a grant from the Robert Wood Johnson Foundation. It is designed to improve the care of seriously ill patients near the end of life. Faculty leaders will develop and implement curricula that focus on state-of-the-art care, and develop infrastructures within their own institutions to pilot test curriculum components and network with other providers of palliative and end-of-life care.

In addition to her College of Medicine appointments, Dr. Bernard is also associate chief of staff of Geriatrics and Extended Care at the VA Medical Center, co-chair of the Oklahoma Center on Aging, and director of the Oklahoma Geriatric Education Center. Dr. Bernard also serves as chair of the Geriatrics Task Force of the Council on Mental and Public Health for the Oklahoma State Medical Association.

**Nobel Laureates Scheduled to Speak at University of Oklahoma Health Sciences Center**

A spring lecture series on human genetics is scheduled at the University of Oklahoma Health Sciences Center. During a four-month period beginning in January, 15 internationally recognized geneticists will teach a graduate seminar and deliver a public lecture. Included in the group are three Nobel Laureate recipients. Harold Varmus, director of NIH, will present "The Molecular Genetics of Cancer" on Jan. 12, 1999.

Thomas R. Cech, of the University of Colorado will present "RNA Machines: Ribozymes and Telomerase" on Jan. 26, 1999.

Gobind Khorana, of the Massachusetts Institute of Technology will present "Rhodopsins and Intramolecular Charge Transfer in Vision" on April 20, 1999.

The series, presented by the Department of Biochemistry and Molecular Biology in the OU College of Medicine, is free and open to the public. Lectures begin at 4 p.m. in the Basic Sciences Education Building, 941 Stanton L. Young Boulevard, on the OU Health Sciences Center Oklahoma City campus. For more information, call 405/271-2221 ext. 1215.

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**Medicine Day at the Capitol  
Feb. 3, 1999**

Call Kathy Musson, OSMA Director of Governmental Affairs,  
405/843-9571 or 800/522-9452,  
for more information.

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**Volunteers Needed for  
"Doctor of the Day"**

Physicians are needed to serve as "Doctor of the Day" at the Oklahoma Legislature next session. Tulsa County Medical Society will be taking volunteers for the month of February.

The Osteopathic Association will be filling the month of March. Oklahoma County Medical Society will be taking volunteers for April. Rural county physicians are encouraged to fill the days for May.

The "Doctor of the Day" is assisted by the "Nurse of the Day" and can expect to see up to 15 patients. Hours are from 9 a.m. to approximately 4 p.m. Monday through Thursday. Each "Doctor of the Day" is introduced in the House and Senate by his/her State Representative and State Senator. The "Doctor of the Day" program helps add to the OSMA's presence at the Capitol and is an interesting way to get an up-close look at politics in action.

Tulsa County physicians wishing to volunteer for "Doctor of the Day" for February should contact Paul Patton at TCMS at 918/743-6184. Oklahoma County physicians wishing to volunteer for April should contact Doris Clark at 405/843-5619.

Rural physicians can contact Lydia Shirley at the OSMA headquarters at 800/522/9452 to sign up for "Doctor of the Day" for May.

## Commission Recommends Routine Physician Competency Testing

The Pew Health Professions Commission has issued a report on professional licensure of physicians. It is the follow-up document to the report issued in 1995 and recommends both state and federal actions to address what they consider to be a lack of uniform regulations in the health care environment.

In response to the Pew Commission report, Gordon Deckert, MD, an Oklahoma City psychiatrist who serves on the Public and Mental Health Council of OSMA, spoke with the *Journal* about his reaction to the recommendations. Dr. Deckert has gained a great deal of national prominence addressing issues of physician licensure and competency measures through many years of service with the United States Medical Licensing Examination (USMLE). Physicians on the eastern and western coasts of the United States often face professional matters before those located in the midwest (including Oklahoma); for that reason, argues Dr. Deckert, we must address the “coming reality” presented by the Pew Commission report.

Of the recommendations, Dr. Deckert looked most favorably upon the suggestion that states increase their funding of boards. “In my experience, I have found that state licensure boards often wish to conduct more activities, but they lack the funding to do so,” said Dr. Deckert. Also viewed favorably, although to a lesser degree, is the suggestion that state boards include more public, non-physician representation. “Public representation is very helpful and valuable,” said Dr. Deckert. “Individuals I have encountered in these situations have been informed, learned members of the public who speak out of concern for medical care in our state.” The requirement that health professionals display competence over their lifetime is somewhat the current reality. “This is already transpiring in the managed care system. Physicians receive outcome measurements and obtain feedback through data being collected at this time,” said Dr. Deckert. “My real concern for this is how it will be done and who will do it. Currently, exams in the United States measure the minimum knowledge level required for licensure. What is missing now is the clinical skills component—determining skill in patient diagnosis as well as disease diagnosis.”

One recommendation that Dr. Deckert believes is questionable is the national scope of practice or competency standards for licensed health professionals. “If this were scientifically based, I would very much support it. However, physicians should be allowed to practice in areas in which they are competent,” said Dr. Deckert. “Medical boards have available at this time examinations to measure physician competence; however, they are only used when a physician is in trouble.”

### *Assuring Competence*

A report on professional licensure from the Pew Health Professions Commission recommends:

- ◆ Congress establish a national advisory panel to set national scope of practice and competence standards for all licensed health professions.
- ◆ State boards be more accountable to the public, with beefed-up consumer representation and more public oversight.
- ◆ States increase their funding of boards.
- ◆ Boards provide more and better information to the public on licenses.
- ◆ States require all health professionals to demonstrate their competence throughout their careers.

(*American Medical News*, Nov. 16, 1998)

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## Oklahoma Physician Comments on "60 Minutes"

During the month of November, recognized by national and local media as "sweeps," CBS aired an episode of "60 Minutes" featuring Dr. Jack Kevorkian. During the broadcast, Dr. Kevorkian was shown administering a lethal injection to Mr. Youk, an individual who sought Dr. Kevorkian's assistance in ending his life.

The following day, Nancy W. Dickey, MD, president of the AMA, issued a response statement from the American Medical Association. She states that Dr. Kevorkian's actions violated the role of the physician as caregiver, and expresses disappointment in CBS and "60 Minutes" for trivializing the death of Mr. Youk for the sake of audience ratings.

The *Journal* contacted Oklahoma physician Timothy D. Siler, MD, requesting a response to the AMA statement issued by Dr. Dickey. Dr. Siler, who currently serves as Medical Director of Hospice for Odyssey Health Care Inc., offered the following response:

"I do not completely agree with the AMA's response to '60 Minutes.' First of all, I do not agree with their disparaging remarks about Dr. Kevorkian. I believe that he is a physician whose efforts are sincere in dealing with a problem that all humans and physicians have to deal with, namely death. Our country is struggling with this issue because of our great cultural diversity. The United States of America does not have a cultural norm as far as its feeling towards how terminal patients should be managed.

We as a culture are confused by hedonism, our departure from spirituality, litigiousness, and the hope of curing disease offered by modern technology. Dr. Kevorkian's approach to this cultural dilemma is an extreme one, and even

though I do not agree with his beliefs and actions, I can respect that he is trying to deal with this problem in his own way.

The real issue with most of Dr. Kevorkian's patients is a relief from pain. The American medical culture has not effectively dealt with chronic pain, although great strides are being made in this area. The majority of people, when asked what they fear about dying, reply that they fear suffering the most. Fortunately today we have at our disposal modalities which can relieve pain in all but a very few cases.

The hospice movement worldwide is attempting to not only relieve pain, but also relieve emotional, spiritual, and family suffering. The terminal process can be a time that brings family together and fosters communication and transfer of values from the dying patient. In going through the terminal process with their loved ones, families learn what is really important about living.

At the end of their statement the AMA gets more to the point in that they express a more positive and a compassionate approach to dealing with the terminal process. I wish they would have put this at the first of their reply instead of at the last.

Even though I do not agree with Dr. Kevorkian's actions, I respect his courage and resolve in addressing America's cultural confusion about dying."

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"The real issue with most of Dr. Kevorkian's patients is a relief from pain. The American medical culture has not effectively dealt with chronic pain, although great strides are being made in this area."

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## Number of Physicians, Spouses in Congress Growing

November's elections returned physicians to Congress in record numbers as seven physician incumbents were reelected to their congressional positions. One physician challenger was also elected, as well as seven physician spouses (six incumbents and one newcomer).

In an interview with the *Journal*, Oklahoma Representative Tom Coburn, MD, commented on the involvement of physicians in Congress. When asked why physicians are becoming involved politically on a national level, Rep. Coburn indicated that it is often out of frustration with the status of healthcare in our nation. "Physicians get involved because they are sick and tired of government infringement on the practice of medicine," said Rep. Coburn. "We need a change in our healthcare system. The HCFA is an example of multilayer bureaucracy, where its left hand doesn't know what its right hand is doing. We need to eliminate the system and start over."

The idea of a physician politician is not the same as a physician in Congress, according to Coburn. "Physician politicians are not any different from politicians," he said.

"The difference between physician politicians and physicians in Congress is a physician in Congress is there to do what is necessary; they are free to do the right thing."

Personally, Rep. Coburn has been directly involved in several issues, including: HIV testing and partner notification; a Presence of Life bill, written to establish the presence of fetal heart rhythms and brain waves as life, where the absence of heart rhythms and brain waves defines death; and healthcare reform via changes in Medicare, home health care, HMOs and insurance.

Physicians can take an active role in changing the current state of healthcare in America, without running for political office. "Physicians can lobby their congressman on issues that are important to healthcare and medicine. Keep them busy answering your inquiries, rather than allowing them opportunities to create new regulations," Rep. Coburn said. "We have to start over. We ought to have the freedom to go to the doctor of our choice. It should be a personal and private choice, since personal and private things occur when we seek medical care—but that is not allowed in our country."

## LETTER TO THE EDITOR

### Are you happy with today's medicine?

#### TO THE EDITOR:

Members of the Oklahoma State Medical Association...

Are you happy with medicine? Do you miss the good old days? Do you wish that things had not changed? Do you think that the young doctors don't take responsibilities of call, etc., like they should? Do you miss private practice over stress managed care? In other words, are you happy with today's medicine? Answer our survey and I'll get results back in a few months.

Letters to the Editor do not necessarily reflect the editorial policies or beliefs of The Journal or the Oklahoma State Medical Association. All submissions are subject to editing.

Address your letters to:  
Ray V. McIntyre, MD  
OSMA Journal Editor  
601 W. I-44 Service Rd.  
Oklahoma City, OK  
73118

Please answer the survey questions and return to:  
Noble L. Ballard, MD  
c/o OSMA Journal  
601 W. I-44 Service Rd.  
Oklahoma City, OK 73118

I encourage you to be very free and open about this and to answer these questions for a statewide opinion poll.

Noble L. Ballard, MD  
Altus

#### Survey questions are:

1. Are you happy being a doctor?
2. Why?
3. Are you working for an MSO or self employed?
4. Do you think MSOs know how to manage doctors or are they learning on the job?
5. Are you happy with your income?
6. Has your income changed either up or down?
7. Has your call increased up or down?
8. Are you urban, suburban or rural?
9. Has your life changed in the past few years?
10. Do you still have the ideas you had in medical school?
11. Do you take more time off than you did a few years ago?
12. Are you working harder?
13. Do your patients still respect you as they did? More? Less?
14. Do you think older doctors are getting in a rut and do not take medicine too seriously?
15. Are you still glad to be a doctor?
16. Would you still encourage a son or daughter to go into medicine?
17. What do you think is the best practice situation in today's environment?

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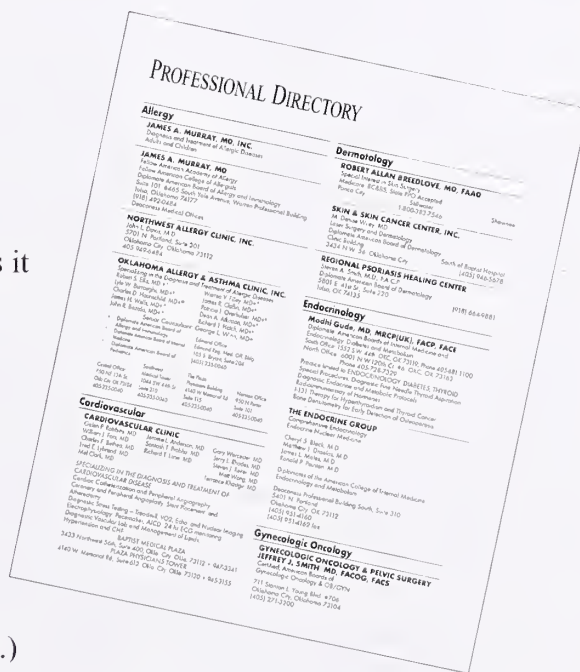
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# MEDICAL UPDATE

## From the Oklahoma State Department of Health

### **Congenital Hypothyroidism Screening in Oklahoma: A Change in Follow-Up Recommendations for 1999**

*Pam King, B.S.N., R.N.*

*William Bryant, M.D.*

**Effective January 1999, the Newborn Metabolic Disorder Screening Follow-up Program of the Oklahoma State Department of Health will no longer track hypothyroidism screen results of one abnormal T4 with normal TSH result.**

The Oklahoma State Department of Health Newborn Metabolic Disorder Screening Program (NMDSP) began screening for congenital hypothyroidism (CH) in 1979 and has subsequently identified 159 affected newborns. In 1997, Oklahoma had 46,740 live births, 51,431 specimens submitted to NMDSP Laboratory for screening, 1,302 infants identified with an abnormal thyroid screen, and 11 infants diagnosed with CH with an average treatment age of 23.2 days (see Table 1). The NMDSP identifies an average of 14 CH cases each year. The pediatric health care provider can anticipate that in his/her practice, one out of 64 infants will be identified with an abnormal T4 with normal TSH result, and one out of 82 will be identified with an abnormal TSH value. In summary, one out of 36 infants will have some degree of abnormality on the thyroid screen.

#### **Background**

Congenital hypothyroidism (CH) is one of the most common causes of preventable mental retardation and requires prompt diagnosis and treatment with daily thyroid hormone. CH is caused by an absent, malfunctioning, misplaced or malformed thyroid gland. The most common cause of CH, sporadic thyroid dysgenesis, occurs frequently with a national incidence of 1:4,000 live births. Other causes occur less frequently at an incidence greater than 1:30,000 live births. Oklahoma CH incidence is 1:3,321. The newborn affected with CH appears normal at birth and may not present clinically with symptoms until the hypothyroidism is severe and long standing. The clinical symptoms of CH include a large posterior fontanel, prolonged jaundice, macroglossia, hoarse cry, distended abdomen, umbilical hernia, puffy face, cold extremities, persistent constipation, and hypotonia. Without prompt and adequate treatment, mental and growth retardation occur.

Thyroid hormone (thyroxine, T4) is essential for normal growth and development. For the affected infant, initiation of early treatment can prevent permanent neurologic and developmental damage. Thyroid hormone replacement should be started as soon as possible after confirmatory serum testing. Ideally, treatment should begin by two weeks of age. Treatment is indicated not only for the infants who clearly have CH, but also those with mild serum TSH elevations that may ultimately represent transient hypothyroidism. Treatment should be directed at normalizing the T4 levels relatively rapidly. Once on therapy, these children will require regular monitoring to ensure that they remain euthyroid during the rapid growth and development of infancy. Inadequate or delayed treatment can result in developmental disability.

All states screen for CH. In Oklahoma, radioimmunoassay is utilized to quantitate the level of T4. If the T4 value is less than 10 percent of the samples tested that day, then TSH screening is performed. A thyroid screen is reported as abnormal if the TSH is equal to or greater than 25  $\mu\text{IU/ml}$  or if the TSH is normal and the T4 value is less than 1 percent of the samples tested that day. The NMDSP Follow-up Program contacts the physician with recommendations for follow-up testing on all abnormal thyroid screens.

A screen result of TSH > 50  $\mu\text{IU/ml}$  or two abnormal thyroid screens will require diagnostic serum testing; borderline results (TSH 25 – 50  $\mu\text{IU/ml}$ ) will require a repeat filter paper screen. Repeat testing should be performed within 48 hours from notification. For infants who require diagnostic serum testing, which includes a total T4 or free T4, and TSH, a reference or hospital laboratory will have to be utilized.

## Premature and Sick Infant Screening

All premature and sick infants should be screened at 3 to 7 days of age with a repeat screen at 14 days of age. For the premature or sick infant identified with an abnormal T4, a serum free T4 (measured by direct dialysis or an equivalent method) is the recommended follow-up study.

### NMDSP Pediatric Endocrinology Consultants

#### TULSA

William Bryant, MD  
(918) 491-3939

David Jelly, MD  
(918) 491-3939

#### OKLAHOMA CITY

David Domek, MD  
(405) 945-4525

Piers Blackett, MD  
(405) 271-6764

## New Follow-up Recommendations for Screen Results of One Abnormal T4

The NMDSP pediatric endocrinology consultants have agreed that a screen result of one abnormal T4 with a normal TSH is at low risk for congenital hypothyroidism, and have made the recommendation that follow-up testing should be left to the discretion of the infant's health care provider. Due to this recommendation, on June 2, 1998, the NMDSP Follow-up Program stopped notifying parents of one abnormal T4 with normal TSH results. The NMDSP Laboratory will continue to notify the submitter and health care provider listed on the filter paper requisition of abnormal T4 with normal TSH results, and for the convenience of the provider, a numeric T4 value is listed. Effective January 1999, further letter notification from the NMDSP Follow-up Program for screen results of one abnormal T4 with normal TSH will be discontinued, monitoring activities for repeat testing will no longer be a service provided by follow-up staff, and repeat testing will be at the discretion of the provider. Please note, the NMDSP Follow-up Program staff will continue to monitor and notify providers of the need for serum free T4 and TSH testing on all infants identified with two abnormal T4s with normal TSH screen results.

## Referral

The NMDSP recommends any infant with an abnormal serum result be referred for evaluation or consultation with a pediatric endocrinologist for diagnosis, treatment and follow-up recommendations. The *Newborn Metabolic Disorder Screening Program Rules and Regulations* booklet, revised 1998, states that all confirmed cases of congenital hypothyroidism should have a consult or referral to a pediatric sub-specialist. A pediatric sub-specialist indicates a board-certified pediatric endocrinologist, or a physician board-certified in pediatrics whose area of primary practice includes endocrinology.

The NMDSP rules require all providers who examine a child less than three months of age to verify that the child has been adequately screened. For more information or to obtain screen results, please contact:

Edd Rhoades, MD, MPH, or  
Pam King, RN  
Maternal and Child Health  
Service, (405) 271-6617 or  
1-800-766-2223, ext. 6617.

**Table 1. 1997 Abnormal Thyroid Screen Results**

| Result  | Number of<br>Filter Paper | Repeat Testing<br>Normal | Confirmed<br>Congenital<br>Hypothyroidism (CH) | Confirmed<br>Transient<br>Hypothyroidism | Expired | Lost to<br>Follow-up |
|---|---------------------------|--------------------------|--|--|---------|----------------------|
| TSH > 50 IU/ml  | 17                        | 3                        | 6  | 8  | 0       | 0                    |
| TSH 25-50 IU/ml   | 466                       | 448                      | 1  | 0  | 9       | 8                    |
| One Abnormal T4<br>With Normal TSH                        | 573                       | 439                      | 0  | 0  | 17      | 117                  |
| Two Abnormal<br>T4s<br>With an Abnormal<br>TSH Identified | 87                        | 81                       | 3  | 0  | 1       | 2                    |
| Two Abnormal<br>T4s<br>With Normal TSH                    | 159                       | 129                      | 1 CH<br>1 hypopituitarism<br>(HP)              | 0<br>* 7 premature                       | 9       | 12                   |
| Totals  | 1,302                     | 1,100                    | 11 CH<br>1 HP                                  | 8 Transient<br>7 Premature               | 36      | 139                  |

\* Premature infants with an abnormal serum result whose final diagnosis was not reported

## DEATHS

### **Vance A. Bradford, MD** **1910 - 1998**

Vance A. Bradford, MD, died Oct. 23, 1998. He was born Nov. 16, 1910, in Plato, Mo., and was graduated from the University of Oklahoma School of Medical in 1938. Dr. Bradford served in the United States Army during World War II, including 24 months of active duty overseas; at discharge, he had attained the rank of Major. In 1947, Dr. Bradford located his practice in Oklahoma City, where he was affiliated with several hospitals including Mercy, Wesley/Presbyterian, Baptist, Deaconess, University, South Community and St. Anthony's. Dr. Bradford, who retired in 1984, was a member of the Royal Society of Medicine in London and the Oklahoma State Medical Association.

### **Joseph S. Raff, MD** **1902 - 1998**

Joseph S. Raff, MD, died Nov. 12, 1998. He was born March 18, 1902, in Montreal, Canada. Dr. Raff received his medical degree from McGill University in Montreal in 1927. He joined the United States Army Medical Corps as 1st Lieutenant in 1933, and served 12 years active duty and 20 years active reserve before retiring as Colonel in 1965. Following his active military service, Dr. Raff established his medical practice in Madill, Okla., where he practiced general medicine until retiring in 1970. In 1978, Dr. Raff became a life member of the Oklahoma State Medical Association.

### **Herbert J. Forrest, MD** **1920 - 1998**

Herbert J. Forrest, MD, died Nov. 14, 1998. He was born Nov. 30, 1920; he received his medical degree from the George Washington School of Medicine in 1943. From 1946 to 1948, Dr. Forrest served as 1st Lieutenant in the U.S. Army Public Health Service. From 1957 to 1983, Dr. Forrest practiced plastic surgery in Tulsa. In 1986, the Tulsa County Medical Society named him one of three Doctors of the Year for his lifetime contribution to his patients, profession and community. Dr. Forrest was a member of the American Board of Surgery, the American Society of Plastic and Reconstructive Surgery, the Tulsa County Medical Society and the Oklahoma State Medical Association, of which he had been a life member since 1983.

## IN MEMORIAM

### 1998

|                                   |              |
|-----------------------------------|--------------|
| Roy K. Goddard, Jr., MD .....     | February 9   |
| Byron Fremont Smith, MD .....     | February 21  |
| Emil Maurice Childers, MD .....   | February 22  |
| Burton Bonnard McDougal, MD ..... | February 23  |
| Robert T. "Tom" Cronk, MD .....   | April 15     |
| Jack Paul Enos, MD .....          | April 19     |
| Paul Arthur Barnett, MD .....     | April 28     |
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| David C. Ramsey, MD .....         | May 22       |
| William H. Reiff, MD, FACS .....  | May 25       |
| Jerry L. Puls, MD .....           | June 5       |
| James M. Behrman, MD .....        | June 5       |
| Charles N. Talley, MD .....       | June 14      |
| Thomas C. Points, MD, PhD .....   | June 15      |
| Charles M. Cameron, Jr., MD ..... | June 22      |
| Philip G. Tullius, MD .....       | July 4       |
| Louis H. Charney, MD .....        | July 8       |
| Ralph L. Walker, DO .....         | July 11      |
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| Edwin R. Shapard, MD .....        | July 28      |
| Paul L. Masters, MD .....         | August 6     |
| Douglas D. Leatherman, MD .....   | August 21    |
| Richard E. Carpenter, MD .....    | August 30    |
| Henry J. Freede, MD .....         | September 9  |
| Chester K. Mengel, MD .....       | September 14 |
| Leaford Thornbrough, MD .....     | September 27 |
| Sumner Y. Andelman, MD .....      | October 6    |
| Eric B. Meador, MD .....          | October 10   |
| Vance A. Bradford, MD .....       | October 23   |
| Joseph S. Raff, MD .....          | November 12  |
| Herbert J. Forrest, MD .....      | November 14  |

## CLASSIFIEDS

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## Help Lawmakers Make the Right Decisions

*Sherry S. Strebel*  
State Legislative Chair

Last year, 1998, was a tough year for medicine in Oklahoma...we had some gains, but we also had a major loss with the passage of the optometric laser surgery bill. This year will be equally important with other non-medical doctors looking to increase their scope of practice. To help us get off to the best start, the OSMA and the OSMA Alliance are sponsoring Medicine Day at the Capitol to be held Feb. 3, 1999, Wednesday of the first week of the 1999 legislative session.



This day will give physicians and Alliance members from across the state the opportunity to meet with their legislators on their own turf (the halls of the legislature) and talk about the issues that are important to medicine and to the healthcare of the citizens of Oklahoma.

The day will begin at 9 a.m. with registration and brief addresses by the leaders of our state government and legislature. We will also hear from Lynne White, the OSMA lobbyist, regarding key medical issues that will be addressed in 1999 by our lawmakers. There will be time for touring the State Capitol (for anyone who may be visiting for the first time) and for visiting in your own legislator's office. Also, a complimentary lunch will be provided for all attending the Medicine Day event, including your legislators and their staff. It's not too early to let your legislator know that you would like to have lunch with him/her that day. The event should end by 1 p.m., or you may stay in the Capitol and go to the galleries of the Senate or House and hear legislation being made.

Get out your calendars now and circle February 3<sup>rd</sup> in red to remind you and your office staff of the importance of being at our State Capitol that day. We are the best qualified voices that our legislators can hear when they are considering legislation with regard to the practice of medicine. It is up to us to make ourselves be heard...and seen! Medicine

Day gives us the best opportunity to get started doing just that! If you've never been involved before, there's no time like the present! We all—physicians and spouses alike—need to be committed to doing all we can to help the lawmakers make the right decisions on medical issues.

Let Medicine Day at the Capitol—Feb. 3<sup>rd</sup>—be a part of that commitment. We all have an opportunity to make a difference and I urge you to not let this opportunity pass you by. You should have received a registration packet by now with an agenda and additional information about the day. Should you have questions, call Kathy Musson at the OSMA, 405/843-9571 or 800/522-9452.

As Franklin D. Roosevelt said, "Let us never forget that government is ourselves and not an alien power over us. The ultimate rulers of our democracy are not a president and senators and congressmen and government officials, but the voters of this country."

**Mark Your  
Calendars**

**Medicine Day at  
the Capitol**

**Feb. 3, 1999**

# THE LAST WORD

## **Oklahoma Physicians Volunteer Time, Skills to Assist Victims of Hurricane Mitch**

Oklahoma physicians have volunteered their time and medical skills to assist victims of Hurricane Mitch, whose high winds and flooding rainfall have destroyed areas of Honduras. Larry Biehler, MD, and his wife, Arlene, of Oklahoma City, traveled to Honduras in October as part of a medical team that accompanied Feed the Children. Medical concerns at that time included polluted water, dehydration, cholera and dengue fever. Julio Cuadra, MD, a Tulsa physician, traveled to Nicaragua to deliver financial aid raised in the Tulsa area.

## **Legislation to Watch**

State Senator Angela Z. Monson has prefiled SB 2, which would require group health insurance and health benefit plans to include coverage for severe mental illness; allowing managed care systems to include coverage; requiring quality of benefits; making certain exceptions; providing for procedures; clarifying application of requirement to agreement, contract or policy provisions.

State Representative Jari Askins and Senator Ben Brown have prefiled HB 1002, which would create the Tobacco Settlement Endowment Trust Fund; authorizing payment of attorney fees under certain circumstances; establishing a Board of Trustees; authorizing Board to provide for management of monies; creating the tobacco Settlement Special Cash Fund; specifying how funds should be disbursed from fund; requiring expenditures of funds be subject to legislative approval.

## **University of Oklahoma Medical Student Appointed Student Representative to the American Academy of Family Physicians**

Andrew Mills, a second-year medical student at the University of Oklahoma and Tulsa native, has been appointed to serve as a student representative to the American Academy of Family Physicians (AAFP) Commission on Quality and Scope of Practice for 1999. The AAFP is the national medical organization representing over 85,000 Family Physicians, Family Practice residents and medical students, and is headquartered in Kansas City, MO.

## **Federal Funding Increase for National Institutes of Health**

Recent budget decisions in Congress have increased federal support for the NIH. The fiscal budget for 1999 includes \$15.65 billion for the NIH, an increase of \$2 billion or 14.9 percent from 1998. The increase is viewed as a "down payment" on the goal of doubling the agency's budget by the year 2003, a goal that is still not certain. (*American Medical News*, Nov. 16, 1998)

## **Voters Respond to Medical Marijuana Initiatives**

During recent elections, voters in five states approved ballot initiatives allowing patients to possess and use marijuana as recommended by their physician for medical use. With federal bans on marijuana still in effect, physicians who prescribe the drug may lose their prescription authority and be excluded from Medicare and Medicaid. However, supporters argue that physicians in states with the new measures who recommend marijuana, but do not prescribe it, cannot be prosecuted. State medical societies in Washington, Oregon, and Arizona were neutral on the issue, while Nevada opposed and Alaska endorsed medical marijuana. (*American Medical News*, Nov. 23/30, 1998)

## **OSMA Board Meeting Scheduled**

The January board meeting of the OSMA Board of Trustees is scheduled for Sunday, Jan. 17, 1999, at OSMA Headquarters.

The Executive Committee will meet at 10 a.m. Lunch will be served at 12 p.m., and the Board of Trustees meeting will begin at 1 p.m. Handbooks are scheduled to be mailed the week of Jan. 4, 1999.

## **Award Nominations Due**

Nominations for the Wyeth Ayerst and Don J. Blair Friend of Medicine Award are due in writing prior to the OSMA Board of Trustees meeting on Jan. 17, 1999. Last year's recipients of the Blair Award were Kent King, MD, and Marlo and George Prothro, MD.

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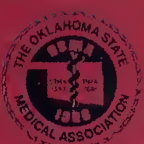
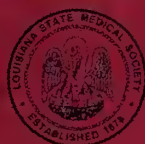


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OKLAHOMA STATE MEDICAL ASSOCIATION  
FEBRUARY 1999



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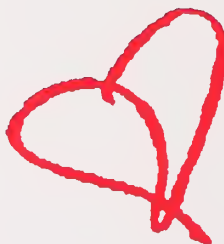
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Winter scene from Shanoan Springs Park in Chickasha.  
Photo by William "Bill" Harrison, MD.  
Art direction by Transcript Press, Norman.





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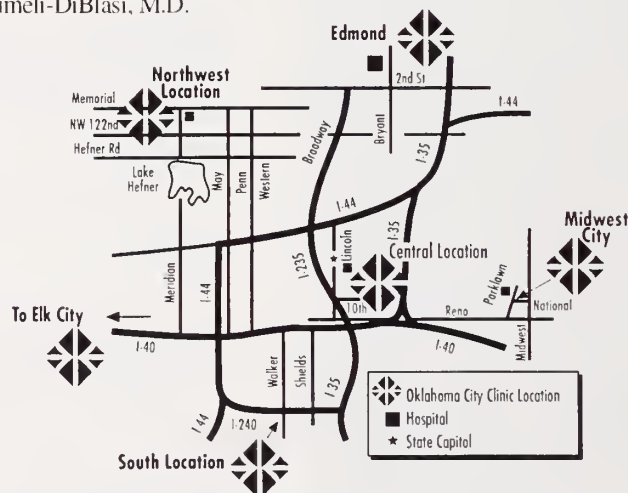
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## Toolchest Item

Goal I of the 1998 Council on Planning and Development was to... "Assume a more active and visible role in promoting and improving health education." And the Council put in motion initiatives aimed at moving OSMA to the stated goal. The Council's wisdom deserves the kudos and support of every physician.

In support of the Council's goal, we would like to take the editorial privilege of reminding the readers of the *Journal* that the scientific articles published here are *par excellence* educational agents. Not only are our Oklahoma physicians kept abreast of the work of our medical scientist authors, the entire medical world taps into our "Oklahoma information" through review article citations, abstracting services, foreign subscriptions, reprint services, and reference citations. Medical textbook citations insert *Journal* generated information into the mainstream of medical education. The *Journal* is heard around the world when significant information is published.

Also, we believe that many of the *Journal's* Commentary articles and Letters to the Editor have a significant effect on health education by stimulating discussion and debate on evolving ideas in medical economics and health care delivery. On occasion, the public media features interesting medical advances that have been published in the *Journal*, and these features give our authors a positive public image and an excellent opportunity for health education of the general public.

The *Journal* has a developing authenticity and credibility in the realm of medical science, and is already well established as a respected portal for regional scientists to enter their work into the medical literature. A considerable public relations benefit redounds to Oklahoma, and to the OSMA as publisher, from this printing of timely health education material. A major portion of the expense of production is offset by advertising rev-

enue, and the OSMA membership subscription recoups dues money for the *Journal* reader.

In addition to an important medical education role, in this day of nondurable computer information, the *Journal* serves a vital archival function. By custom, the *Journal* has been a news forum and a communication channel to the OSMA membership, even though these usages compromise the *Journal's* scientific credibility to some degree.

Medical scientists submit manuscripts to peer-reviewed journals that have the mission of publishing timely scientific articles. They are reluctant to publish in journals that feature polemic projects, unrefined news, or political initiatives. So in order to maintain a core content of good scientific articles, the *Journal* needs to limit the amount and kind of non-scientific material printed.

This limitation imposed by journalistic necessity should not be a block to the flow of information, alerts, or even persuasion, between OSMA leaders and members, but it does direct that other channels of communication be improved and developed to carry the controversial items.

We believe the *Journal* has been prudently successful in its mission to become an entry portal for "our" medical scientists to contribute significantly to medical knowledge and medical education. It is a valuable item in OSMA's toolchest to serve the public.



Ray V. McIntyre, MD  
Editor-in-Chief

---

"Medical  
scientists  
submit  
manuscripts  
to peer-  
reviewed  
journals that  
have the  
mission of  
publishing  
timely  
scientific  
articles."

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# PRESIDENT'S PAGE

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"The process of review of patient information is an important clinical measure."

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## Peer Review, Credentialing and Records

Several related topics are the subject of this month's review. They share the thread of patient information review, retrospective data collection and physician credentials. Each are important in the practice of medicine, and are of importance to OSMA members.



The process of review of patient information is an important clinical measure. Practitioners review the clinical history of their patient, the present illness, and laboratory results that assist in telling the story of an individual's disease. This information recorded on the patient's chart becomes the basis for others to review. The development of clinical syndromes is based on the fundamental findings of a constellation of discoveries in the physical exam, laboratory and patient's clinical course over time. The diagnosis of hyperthyroidism, for example, is based on the appearance of the patient and the laboratory data. Relevant clinical data is a fundamental basis of the clinical practice of medicine. Review of this information, recorded in the patient's medical record, by a group of physicians practicing together with the doctor, is crucial to the process of peer review. Application of

this process to include the broader elements of laboratory, hospital systems including nursing, supply and other support elements, can result in the improvement of care for patients in that facility. During the past 10 years, four articles have been published in the *OSMA Journal* about peer review or accreditation. Most physicians have some type of peer review, either through their hospital staff or by third party reviews of patient management. Yes, peer review has become part of your medical life. What is the latest on this issue?

Ten months ago the Oklahoma Supreme Court ruled that "staffing, credentials and peer review records" relating to physicians were not exempt from discovery by existing state law. Three other states have had similar court decisions. Members of the OSMA received correspondence about these issues last spring. An active coalition involving your OSMA leadership has been formed to develop a strategy and address these issues. Specific information will be distributed at a later date. Physicians who continue to actively volunteer their time to provide this important service are reminded that this process is essential to the provision of continued quality care for patients. Thank you for your efforts.

The Oklahoma Centralized Verification Organization became a member service of the OSMA on

January 1, 1999. The OCVO, certified by the National Committee for Quality Assurance, has 60 health care organizations that subscribe to the plan of one comprehensive initial application and one comprehensive recredentialing form that meets the needs of all organizations. A development of the Tulsa County Medical Society, the OCVO has provided a mechanism to decrease the onerous paperwork involved in the task of credentialing. The physician completes the initial comprehensive form and returns it to the OCVO. The information is verified and reviewed by the doctor. Although each health care organization may have a few additional papers specific to that group, the nightmarish load of blank papers has been diminished to a few. A statewide uniform form is being developed as a result of legislation, and Michele Seba, a Certified Medical Staff Coordinator and transition director of the OCVO, provided information to the Oklahoma State Department of Health about the recommended form. Members of the Advisory Committee include: Dr. Chris Carey, chair; Drs. Rosemary Bellino, Barbara Hastings, Kurt Frantz, Gary Paddack, W.F. Phelps, Steve Mueller, Mr. Brian Foy and your President. Interviews are being conducted for the executive director. The director will be in place soon.

The Health Care Information Advisory Committee has been expanded in response

to the changes included in the revisions of the Oklahoma Health Care Information Act. Your President is one of three physicians in this 35-member group. The purpose of this committee is to advise and assist the Oklahoma State Department of Health with determinations related to the Division of Health Care Information's charge to "provide input and advice to the Division on the collection of health care information, reports to be generated, confidentiality issues, and the development of a five-year plan to implement the Act and create a comprehensive integrated health care database for Oklahoma." The Oklahoma State Department of Health has information of interest to physicians, which is accessible on their web site [www.health.state.ok.us/program/phs/index](http://www.health.state.ok.us/program/phs/index). Data about the health of Oklahomans can be obtained at this site. Information for the *State of the State's Health* can be found here. Serving on this committee is a tremendous honor and an opportunity to work to develop a database on which a plan to improve the health of our citizens can be developed. This is the mission of the OSMA.

Thank you for these opportunities. Have a fabulous February, and Happy Valentine's Day.



Mary Anne McCaffree, MD  
OSMA President

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## Incompetence: Update on the Diagnosis of Alzheimer's Disease

Vicki T. Lampley-Dallas, MD, MPH

This article reviews current guidelines for the early detection and assessment of Alzheimer's disease (AD). The significance, epidemiology, diagnostic criteria, presentation and evaluation of AD, as well as caregiver issues and resources that are available locally will be discussed. This information was presented in May 1998 at a symposium held by the Department of Geriatrics, College of Medicine, University of Oklahoma Health Sciences Center.

### Significance

Until a few years ago, the main value in diagnosing AD early in the course of the disease was to help the family and patient make end-of-life decisions while the patient was still able to participate. The emphasis in research and clinical practice should now be on the detection of those with early dementia and those at risk of developing dementia, for the following reasons:

1. There are medications that show promise of preventing or delaying the onset of AD symptomatology for early cases, but thus far they work only in mild to moderate disease. With early detection, the group likely to develop AD can be targeted for preventive or early therapeutic interventions, and the group unlikely to develop AD can be reassured.<sup>1</sup>
2. Adult day centers are beginning to develop programs for those with mild impairment.<sup>2</sup>
3. The identification of risk factors for vascular dementia can be addressed with appropriate interventions that can reduce the risk of disease or slow the progression if vascular dementia is already present.<sup>2</sup>
4. Early cases must be detected and included in the estimations of incidence and prevalence

of dementia in order to accurately and adequately plan resources for the anticipated enormous financial and social impact of increasing case burden.

### Epidemiology

AD is the most common form of dementia in the USA causing 50 to 65 percent of the cases.<sup>3</sup> Vascular dementia comprises 10 to 15 percent.<sup>3</sup> The prevalence of dementia in people aged 65 and older increases significantly as the population ages. In fact, advanced age and family history are the primary risk factors for AD. There are approximately 2 to 4.5 million people in the United States that currently suffer from AD.<sup>4,5</sup> It is predicted that with the aging of our population, this number will double to 9 million in little more than 30 years<sup>4</sup> and will reach 14 million by the year 2040.<sup>6</sup>

The prevalence of AD in Oklahoma, among individuals over the age of 65 years is estimated to be 20,000. It is a very costly condition. Each victim expends at least \$25,000 annually for health care. Thus, annual expenses top \$100 billion in the United States with Oklahoma's share being about \$500 million.<sup>4</sup> The estimated prevalence of dementia in those 65 years and older in the United States varies in studies from 4.5 to 10.3 percent.<sup>7</sup>

### Definitions and Histological Characteristics

Dementia is a chronic global impairment of intellectual abilities characterized by the presence of multiple cognitive deficits. There are several conditions that result in dementia, many of which are preventable or potentially reversible. For instance, risk factors for vascular dementia include chronic and preventable dis-

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**Table 1. Differential Diagnosis of Dementia**

|  |
|--|
| Infectious and metabolic disorders   |
| Toxins (such as heavy metals)  |
| Environmental exposures<br>(such as insecticides and industrial solvents)            |
| Neoplasms  |
| Head trauma  |
| Nutritional deficiencies   |
| Wernicke-Korsakoff syndrome  |
| Alzheimer's disease and other neurodegenerative<br>disorders, such as Pick's disease |
| Psychiatric disorders  |
| Extrapyramidal syndromes   |
| Depression   |
| Vascular dementias   |
| Post-traumatic dementias   |
| Post-anoxic dementias  |
| Hydrocephalus  |
| Vitamin B12 deficiency   |
| Hypo- or hyperthyroidism   |
| Neurosyphilis  |
| Alcohol-associated dementia  |

eases such as hypertension and diabetes. Medications can result in a reversible delirium that presents like a dementia.

Alzheimer's disease is a progressive neurodegenerative disease. The etiology is not known, however, it is characterized by distinctive brain tissue changes. The most severe changes are seen in the hippocampus, amygdala, and cerebral cortex which are areas associated with memory, language, and reasoning. The characteristic changes consist of neuritic plaques (abnormal neurons), neurofibrillary tangles (abnormal filamentous structures that are within the cytoplasm of abnormal neurons), and diffuse atrophy. The neuritic plaques consist of beta-amyloid protein. The neurofibrillary tangles consist of an altered microtubule-associated protein known as tau. These are found in normal elderly brains, as well as other neurodegenerative diseases, e.g. Parkinson's disease and Down's syndrome. However, in AD they are much more abundant and are considered to be a principle pathologic hallmark of AD.

### Diagnostic Criteria

The diagnostic criteria for dementia include the following, according to the DSM-IV:<sup>8</sup>

1. The development of multiple cognitive deficits that manifests as both impaired short- and long-term memory and at least one of the following:
  - aphasia (language disturbance)
  - apraxia (impaired ability to carry out

familiar motor activities despite intact motor function)

- agnosia (failure to recognize familiar objects despite intact sensory function)
  - disturbance in executive functioning (planning, organizing, sequencing, and abstract thought).
2. These cognitive deficits each cause significant impairment in social or occupational functioning and represent a significant decline from a previous level of functioning.

DSM-IV<sup>8</sup> criteria specific to Alzheimer's disease include the aforementioned criteria for dementia as well as, gradual onset, progressive cognitive decline and the exclusion of other possible causes of dementia. This means that the cognitive deficits are not due to other central nervous system conditions that cause progressive deficits in memory and cognition (e.g. Parkinson's syndrome or cerebrovascular disease), systemic conditions known to cause dementia (e.g. hypothyroidism or HIV), substance-induced conditions, or psychiatric disorders. The deficits do not occur exclusively during delirium. The differential diagnosis of dementia is extensive. Examples are listed in Table 1.

### Presentation of Alzheimer's Disease

AD patients present with cognitive, behavioral or functional symptoms. Typically, patients present complaining of memory problems with, or without, functional decline. Cognitive impairment is usually the earliest symptom and includes memory impairment, aphasia, apraxia, agnosia, executive dysfunction, disorientation, visuospatial dysfunction, dyscalculia, and impaired judgment. With early AD, mild, short-term memory impairment may be the only patient complaint. However, even when no other cognitive problems are apparent in the initial conversation, memory problems disturbing enough to be mentioned at a medical visit warrant further evaluation. These complaints should never be characterized as a part of the normal aging process.<sup>5</sup>

There are effective management strategies and pharmacologic treatments for the symptoms of AD. However, the new pharmacologic therapies have been shown to be effective only in early to moderate stages of the disease. Therefore, early recognition and diagnosis of the condition are essential. Primary care providers are more likely to recognize these symptoms due to their on-going, long-term rela-

tionship with the patient. However, when patients do not present with gross memory deficits, a suspicion of dementia may not be triggered. Therefore, it is important to be aware of the other presentations of AD.

A second presentation involves behavioral problems, rather than memory loss. When behavioral symptoms are the first clues to dementia, the patients are almost invariably brought in by a caregiver. Often these patients deny they have a problem and may not cooperate with the evaluation. Although, any behavioral symptom can occur at any stage of the AD process, some behaviors tend to occur during early AD, while others tend to be prevalent in the later stages. Early behavioral symptoms include personality changes, irritability, anxiety, paranoia, and depression. Later there may be aggression, wandering, sleeplessness, disinhibition, delusions, hallucinations, and withdrawal or apathy. Catastrophic reactions are common also.

A third presentation is one where the patient presents with a somatic complaint. During the course of the evaluation the physician discovers a decline in functional capability and possible cognitive deficits, such as an inability to take medications properly or motor vehicle incidents. This warrants further evaluation for an underlying dementia.

The cognitive and behavioral changes seen in AD manifest themselves in varying degrees of functional impairment. Instrumental activities of daily living (IADLs)<sup>9</sup> and activities of daily living (ADLs)<sup>10</sup> are measures of functional capacity. Cognitive deterioration affects the IADLs before the ADLs. IADLs measure the ability to perform household and social tasks to include the use of the phone, taking medications, meal preparation, transportation, handling finances, shopping, housekeeping and other chores. ADLs measure personal care functions which include toileting, bathing, dressing, grooming, feeding oneself, and transfers (such as, from the bed to a chair) and ambulating. ADLs are affected as the disease progresses.

## **Evaluation History**

Research has shown that primary care physicians often fail to make a correct diagnosis of dementia, making both false positive and false negative errors.<sup>5,11</sup> These errors are attributed to inattention to cognitive functioning during routine office visits and to misperceptions about the normal aging process.<sup>5</sup> A study was done in 1995 in a general internal medicine clinic at an

academic center. It included almost 4,000 patients aged 60 or older and found that almost 16 percent had some degree of cognitive impairment. Approximately 10 percent of these patients had mild impairment and about 5 percent had moderate to severe deficits. Only 24 percent of those with moderate to severe impairment had the diagnosis of dementia documented in their chart.<sup>11</sup>

According to a recent consensus panel, primary care physicians can often diagnose and treat AD without expensive imaging techniques or referral resulting in decreased medical care costs.<sup>6</sup> Once considered a diagnosis of exclusion, the current concept is that AD is a diagnosis of inclusion, with specific, defining characteristics and standardized clinical criteria.<sup>6</sup> The evaluation consists of a detailed history gathered from the patient and, most importantly, from caregivers or other reliable informants. Reported changes should be compared with past performance, as evidence of decline from a previous level of function. The past medical history, family history, social history, alcohol use, toxin exposure history, and a review of all medications to include over-the-counter preparations, mineral supplements, vitamins and health food products should be obtained.

## **Mental Status Examination**

A mental status examination should be done. The Mini-Mental State Examination<sup>12</sup> (MMSE) is a reliable, validated screening tool for cognitive impairment. It addresses orientation, attention, memory, language, and constructions. None of the items test directly for executive function, however, the total score highly correlates with executive function. The MMSE has been found to be prone to the effects of age, education, socio-economic status, and depressive symptomatology, but not to gender.<sup>13-15</sup> Although, it has been shown to be biased to race,<sup>16,17</sup> there is no consensus on whether this bias is eliminated<sup>13,18,19</sup> or persists<sup>16,17,20</sup> when education and socio-economic status are controlled for. The bias results in higher false positive rates in African Americans as compared to whites. That is, the specificity is lower in African Americans. This results in mislabeling and the associated anxiety and emotional trauma of being diagnosed with dementia. It can also result in inappropriate and even harmful treatment strategies used for those false positive patients. The MMSE is highly sensitive to moderate or severe dementia. However, it is relatively insensitive to mild impairment.<sup>1,5</sup> This may

**Table 2. Resources**

|                           |              |
|---------------------------|--------------|
| Alzheimer's Association   |              |
| Oklahoma City             | 405/271-8181 |
| Natl. Headquarters        | 800/272-3900 |
| Area-wide Agency on Aging |              |
| Oklahoma City             | 405/943-4344 |
| Toll Free                 | 800/211-2116 |
| Eldercare                 |              |
| Oklahoma City             | 405/224-6792 |

actually reflect the presence of subcortical dementia, because the MMSE has been found to misclassify up to 40 percent of subcortical cases as normal, using a cutoff of 24/30.<sup>3</sup>

The MMSE and other cognitive screening tests are most useful as a baseline against which to compare future assessments and monitoring progression. The domains that can be affected by dementia include memory, orientation, language, praxis, executive function, constructions (the ability to draw pictures or arrange objects in space), and prosody (the ability to appropriately modify the sound of one's speech in order to convey emotion or altered meaning).<sup>3</sup> Impairment in several domains confirms the diagnosis, according to the recent consensus panel.<sup>6</sup> However, the MMSE and other screening tests do not detect the early cases of dementia.<sup>5</sup>

### Other Scales

Other useful, easily administered, validated instruments include the Geriatric Depression Scale<sup>21</sup> and various ADL and IADL scales. Office staff can be trained to administer all of these tests to the patients or caregivers prior to the patient seeing the physician.

### Laboratory Tests

Laboratory tests are performed to identify any treatable causes of dementia and comorbid conditions.<sup>5</sup> Generally, a CBC, blood chemistries, liver function tests, serology for syphilis, TSH, sedimentation rate, and B12 are obtained. If indicated HIV, folate, heavy metal screening, toxicology, an electroencephalogram or lumbar puncture should be performed.<sup>3,6</sup>

### Imaging Studies

Often a non-contrast computed tomography (CT) of the head is adequate. It can detect cortical strokes, hydrocephalus, tumors and subdural hematomas. However, magnetic resonance imaging does detect subcortical pathology better than CT. Single photon emission computed tomography (SPECT) and positron emis-

sion tomography (PET) scans may show the characteristic parietal and temporal lobe deficits in AD or the widespread irregular deficits of vascular dementia. However, both are extremely expensive, of limited availability, and not necessary for the diagnosis.<sup>3,6</sup>

### Difficult Cases

If the diagnosis remains unclear, formal neuropsychological testing of cognitive function may help to distinguish between normal aging and dementia, as well as identify deficits that point to a specific diagnosis. Patients with an unusual onset or symptomology or whose neurological findings are atypical should be referred to a geriatrician, geriatric psychiatrist, or neurologist.<sup>6</sup>

### Caregiver Issues

Early on, the caregiver should be assessed for stress and depression. The goal of care with dementia is to preserve the patient's autonomy as much as possible while maintaining their health and safety. Consequently, it is also important to determine which problem behaviors warrant intervention. Implementation of interventions begins with caregiver education on the disease process, prognosis, treatment, management, realistic expectations, what behaviors to expect, and what environmental modifications might be beneficial. The management of problem behaviors involves seeking precipitating or aggravating factors, assessing for superimposed medical problems, and evaluating for household psychological stress.

The home environment, financial situation, services needs and barriers to those services, legal issues (such as guardianship and durable power-of-attorney) and end of life issues (such as a living will, advanced directive or durable power-of-attorney for health care) should all be determined.

### Resources

There are several agencies that serve as information and referral resources in the community for health care providers and caregivers. Some of the locally available agencies are listed in Table 2.

### Summary

Alzheimer's disease and other dementias are devastating conditions that exact enormous costs and burdens on their victims, families and society. Recent advances in the treatment of Alzheimer's disease are very encouraging.

However, the newer medications for Alzheimer's disease are effective only in early and moderate stages of the disease. Consequently, this demands early recognition and diagnosis of AD. The Agency for Health Care Policy and Research<sup>5</sup> and a recent consensus panel of experts<sup>6</sup> have published guidelines that enable primary care physicians to accurately diagnose Alzheimer's disease and other dementias without the need to refer the patients to specialists, or for expensive testing, in most instances. This, then, will allow the early treatment and management of dementia in a cost efficient manner.

# The Author

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## Exercise Interventions for Osteoporosis Prevention in Postmenopausal Women

Debra A. Bembien, PhD

Osteoporosis is a bone disease associated with reduced bone mineral density resulting in debilitating bone fractures. According to the National Institutes of Health Women's Health Initiative, effective interventions for bone loss need to be developed. The osteogenic stimulus provided by weight-bearing exercise indicates it is an important lifestyle factor that can be used for prevention of bone loss. Prospective research studies have documented that both aerobic exercise and weight training can be effective in the maintenance and building of bone mineral density in postmenopausal women. Additional benefits of weight training include increased muscular strength, coordination, and balance which could decrease risk for falling and subsequent fractures.

Osteoporosis is recognized as a serious public health problem, affecting 15 to 20 million persons in the United States, with women over the age of 40 being the group most vulnerable to its debilitating consequences.<sup>1</sup> Additionally, about 1.3 million fractures are attributed to osteoporosis annually which are an important cause of morbidity and mortality in the elderly.

Age-related bone loss can compromise the mechanical competence of the skeleton, resulting in increased susceptibility to fractures.<sup>2-3</sup> The extent of bone loss varies among individuals, but on the average, women can lose up to 40 percent or more of their total bone mass after menopause.<sup>4</sup>

Bone loss begins gradually, although the initial sites of loss, the time of onset, and the rates are still not clearly defined. In cortical bone (compact bone, the dense, ivory-like tissue that makes up 80 percent of the skeleton), resorption, or the removal of bone tissue as the result of increased osteoclas-

tic activity occurs at the endosteal surface, resulting in an enlarged medullary cavity and decreased cortical thickness in spite of a continued normal deposition on the outer surface. In skeletal areas where trabecular bone (cancellous bone, the honeycomb tissue seen in the interior of mature bones and about 20 percent of the skeleton) predominates, up to 50 percent of the tissue can be lost, removing important "struts" and resulting in mechanical weakness and eventually in fracture within the structure.

### Bone Metabolism

Bone is a dynamic tissue, continuously undergoing the coupled processes of resorption and formation, known as bone remodeling.<sup>5</sup> These processes are important for maintenance of bone mass in the adult skeleton. If the balance between resorption and deposition is disrupted, such as when bone resorption is greater than deposition, bone mineral density will decline.

The imbalance between resorption and formation can result in osteoporosis. Osteoporosis is categorized into Type I and Type II osteoporosis. Type I osteoporosis develops when circulating estrogen levels decrease after menopause resulting in increased bone resorption without a concomitant increase in formation, thus causing an acceleration in bone loss.<sup>3</sup> This rapid bone loss occurs mainly in trabecular bone, and is characterized by vertebral fractures. The elderly population, due to the natural aging process, has a gradual decrease in bone mineral density which can lead to Type II osteoporosis. The primary mechanism for this age-related bone loss is a decrease in the bone formation phase, thus the bone is resorbed to create a cavity of normal depth, but less new bone is formed failing to completely fill in the cavity.

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Type II osteoporosis affects both cortical and trabecular bone and is associated with hip fractures.

### **Factors Regulating Bone Metabolism**

#### **Estrogen**

The female sex steroid, estrogen, is a critical hormone for the maintenance of bone mass in women. Estrogen regulates bone metabolism causing bone resorption to decrease, thus preventing bone loss. The exact mechanism of estrogen action is not clear as there may be a direct effect through binding to estrogen receptors on bone and/or an indirect effect by modulating endocrine and local factors which mediate the bone remodeling process.<sup>5</sup> In addition, estrogen plays an important role in the adaptive response of bone to load bearing by increasing the osteogenic response to mechanical loading.<sup>7</sup>

Low estrogen levels are associated with an uncoupling of the bone remodeling process, where the rate of resorption greatly exceeds that of formation. Thus, the decrease in estrogen levels during menopause results in an accelerated rate of bone loss of 5 to 9 percent per year. This accelerated phase continues for five to six years after menopause, then slows to about 3 to 4 percent per decade.<sup>2,3</sup> Hormone replacement therapy (HRT) is considered by leading experts to be the most important intervention for both the prevention and treatment of osteoporosis.<sup>8</sup> It is well-documented that HRT increases bone density at the clinically important sites and decreases fracture rates in postmenopausal women.<sup>9</sup>

#### **Calcium and Vitamin D**

Nutritional deficiencies in calcium and vitamin D are another cause of age-related bone loss.<sup>10</sup> Calcium is the main element composing bone and the skeleton stores 99.5 percent of the body's calcium, supplying the plasma with calcium in time of need.<sup>11</sup> Vitamin D is necessary for normal absorption of calcium into the bloodstream from the intestines. The relationship between calcium and vitamin D is crucial for maintaining bone health as there is excess bone resorption on sub-threshold diets of calcium. Although calcium alone will not prevent the accelerated bone loss occurring in the early postmenopause, there is evidence that calcium supplementation increases bone mineral density in elderly women.<sup>12</sup> Researchers have also demonstrated that supplementation of calcium for a group of institutionalized elderly substantially reduced their fracture rates.<sup>13</sup> Vitamin D, on the other hand, is extremely important for the normal absorption of calcium from the diet and therefore affects calcium requirements. Additionally, vitamin D supplemen-

tation reduces fractures in the elderly.<sup>14</sup> This is a very important variable since vitamin D deficiency is common among the elderly.<sup>10</sup>

Although the RDA for calcium is 800 mg for adults, the NIH Consensus Conference has recommended that calcium intakes should be 1,500 mg/day for estrogen-deficient postmenopausal women and 1,000 mg/day for women on HRT.<sup>15</sup> Heaney suggested that the vitamin D requirement for the elderly is higher than the RDA of 200 IU, thus he recommends daily intake of 800 IU of vitamin D in this population.<sup>10</sup>

#### **Physical Activity**

Another important factor related to bone loss and osteoporosis is physical activity.<sup>16</sup> Since bone is a living, adaptive tissue, there is evidence to suggest that the strength and density of bone are related to the level of stress placed upon it. According to Wolff's Law, bone strength adapts to external forces placed upon it.<sup>17</sup> When stress is applied to bone, the tissue responds by increasing in mass, density, and structural properties.<sup>18</sup> The skeleton has two main extrinsic forces acting upon it during exercise: 1) supporting body mass against gravity; and 2) the musculo-tendinous unit pulling on the bone during muscular contraction. When the bone is overloaded, the resultant strain shifts the bone remodeling cycle in favor of formation and bone mass is increased.

While the extremes of inactivity (bed rest) and activity (athletes) have been fairly well documented for their effects on bone mass, the effects of physical activity patterns, both past and present, for normally active individuals are less well-defined. Positive relationships between bone mineral density and physical activity have been documented in cross-sectional studies.<sup>19,20</sup> In addition, muscle strength was found to be a significant predictor of bone mineral density in the femur, spine and forearm in women 20 to 73 years of age.<sup>21</sup>

Animal studies have shown that bone formation is greatest when the mechanical stimulus involves dynamic high strain magnitudes applied at high rates.<sup>22</sup> There is evidence that only a small number of loading cycles are required to increase bone mineral density.<sup>23</sup> These findings have implications for designing exercise programs to increase bone mass in humans. Dynamic exercises which apply loads of high magnitude and rate, such as those performed during resistance training, should effectively load the skeleton

#### **Assessment of Bone Mineral Density**

Assessment of skeletal health has been difficult in the past, since only limited means have been

available to assess the structural integrity and functional status of the skeleton. Bone loss by itself is asymptomatic for many years, not obvious to either the patient or to the physician.<sup>24</sup> The development of Dual Energy X-Ray Absorptiometry (DXA) has permitted precise measurement of areal bone mineral density ( $\text{g}/\text{cm}^2$ ) which can be used to predict risk for osteoporotic fractures.<sup>25</sup> In addition to excellent reproducibility, radiation exposure from bone scans using DXA is much lower ( $<5$  mRem) than that from single photon methods (15 mRem) and computed tomography (100 — 1,000 mRem).

DXA is an important clinical tool for assessing osteoporosis risk, monitoring anti-resorptive drug treatments in patients and for aiding patients' decision-making about the use of HRT. The exponential relationship between decreasing bone mineral density and increasing fracture risk allows bone mineral density values to be used to estimate future fracture risk. For example, one's current relative fracture risk increases 1.5 to 2.5 times for each standard deviation (SD) that bone mineral density is below the young adult mean value.<sup>26</sup> The World Health Organization (WHO) defines osteopenia (low bone mass) as bone mineral density between 1.0 and 2.5 SD below the mean bone mineral density of young adult Caucasian women.<sup>27</sup> The threshold for osteoporosis is a bone mineral density more than 2.5 SD below the young adult reference population which includes greater than 95 percent of osteoporotic fractures.

Bone remodeling is a complex process which tightly couples resorption and formation in a cell unit called a bone remodeling unit.<sup>28</sup> The skeleton has millions of these bone remodeling units which are under the regulation systemic hormones as well as local bone factors, although the exact mechanisms for their regulatory roles are unclear. High rates of bone turnover, or bone remodeling, lead to net bone loss.<sup>29</sup> It may be useful, therefore, to monitor rates of bone resorption and formation by measuring biochemical markers in serum or in urine which reflect bone remodeling. Recently developed commercial assays have made the assessment of such markers less tedious and relatively inexpensive to perform. Osteocalcin is an indicator of bone formation as it is secreted by the osteoblast cells. The breakdown products of type I collagen in bone, such as C-telopeptides, can be measured as markers for bone resorption. Knowledge of the mechanisms of bone loss are important for developing new therapeutic regimens to prevent osteoporosis. Biochemical markers of bone remodeling might be useful for monitoring the effects of these therapies on bone.<sup>30-31</sup>

### Exercise Interventions for the Prevention of Osteoporosis

#### Aerobic Exercise

Although it has been shown that weight-bearing physical activity influences bone metabolism, the type of activity which benefits bone the most is controversial. The effects of aerobic training on bone tissue have been investigated by Smith et al who showed that aerobic activities, including dancing, walking, and jogging, effectively maintained bone mineral content in the radius and ulna in both premenopausal and postmenopausal women.<sup>32</sup> Recently, Bravo et al showed that aerobic activity effectively preserved the bone mineral density in the spine of osteopenic women, while there was a significant decrease in the control group.<sup>33</sup>

Heinonen and associates investigated the effects of 18 months of endurance training (walking, jogging, stair-climbing, stationary cycling) at 55 to 75 percent of aerobic capacity on bone mineral density in perimenopausal women.<sup>34</sup> A significant increasing linear trend in the femoral neck bone mineral density was found for the endurance training group whereas the calisthenics and control groups both showed decreases in bone mineral density at this site. Kohrt and associates compared the effects of exercise programs emphasizing ground reaction forces (walking, jogging, stair-climbing) to weight-lifting on bone mineral density in postmenopausal women.<sup>35</sup> Both training groups showed significant increases in spine and Ward's triangle, but the femoral neck bone mineral density increased only with the walking/jogging/stair-climbing program. These studies suggest that aerobic exercise programs emphasizing ground reaction forces have a positive influence on bone.

#### Weight Training

It has been suggested that an exercise protocol which produces high peak force and strain, involves fewer repetitions, and which overloads the entire bone should be the most effective for maintaining and building bone mineral density.<sup>7,23</sup> This description more closely resembles weight training than aerobic training. It has been reported that weight lifters have greater bone mineral density than other athletes.<sup>36</sup> A progressive training protocol that increases muscular strength may enhance bone mineral density because of the strain imposed by the muscle contractions.

There remains much to be elucidated about the effects of different resistance training protocols, the dose-response relationship, and the interaction of exercise and estrogen on bone.

Prospective resistance training studies have documented that high intensity (80% strength) training can have an osteogenic effect at regional sites in estrogen-deficient women.<sup>37,38</sup> Pruitt et al found a nine-month resistance training program for early postmenopausal women resulted in a 1.6 percent increase in lumbar spine bone mineral density compared to a 3.6 percent decrease in the control group.<sup>37</sup> Similarly, Nelson et al found in postmenopausal women not taking estrogen that 52 weeks of high intensity strength training (80% strength) significantly increased lumbar spine and femoral neck bone mineral density compared to the control group.<sup>38</sup>

Few studies on humans have compared the effects of different resistance training programs on the adaptive response of bone. Kerr et al addressed the question of whether the load magnitude (intensity) or the number of load cycles (repetitions) is more important in increasing bone mineral density in postmenopausal women.<sup>39</sup> Subjects participated in one of two resistance training programs for one year: 1) a high load, low repetition program (8 repetition maximum) designed to maximize strength gains; or 2) a low load, high repetition program (20 repetition maximum) designed to maximize gains in muscular endurance. While both training groups had similar increases in strength, bone mineral density improved only in the high load, low repetition program. These results suggested that the maximum load was more important than the number of load cycles for influencing bone mineral density.

**Exercise and Estrogen Treatment**

During the first five years after menopause, women not taking estrogen replacement can lose up to 15 to 35 percent of their bone mass.<sup>4</sup> Although estrogen-deficient women can benefit from weight-bearing exercise, exercise alone cannot substitute for HRT during the early postmenopausal phase of rapid bone loss. The combination of HRT and exercise may yield the greatest effect on bone as estrogen may enhance the osteogenic effect of mechanical loading. Several studies have examined whether estrogen plus weight training is more effective than just weight training or estrogen replacement alone. Notelovitz et al showed weight training enhanced the bone conserving effect of estrogen in surgically postmenopausal women.<sup>40</sup> After one year of weight training plus estrogen, spine bone mineral density significantly increased  $8.3 \pm 5.3$  percent while the estrogen only group maintained bone mineral density  $1.5 \pm 12.4$  percent. Kohrt et al showed that the combination of HRT and high intensity exercise

had additive and synergistic effects on bone mineral density, depending on the site measured.<sup>41</sup> These findings suggest that each treatment is acting via an independent mechanism, thus exercise can have an additional beneficial effect on bone when used in conjunction with estrogen.

**Considerations for Exercise Prescription**

Several factors should be considered when developing an exercise program for the postmenopausal woman. In addition to any cardiovascular/orthopedic limitations, it is critical to assess the current bone status of the woman to determine whether she already meets the diagnostic criteria for osteopenia or osteoporosis. Caution must be used with women who have low bone mass or osteoporosis as the incorrect form of exercise could result in a fracture. Bonnick recommends that women with osteoporosis should avoid any exercise that: 1) jars spine, such as high impact sports (jogging, high impact aerobics); 2) involves spinal flexion (situps, toe-touches, rowing machines); 3) increases risk of falling (skating, skiing, trampolines); and 4) involves hip adduction/abduction movements.<sup>42</sup> Safe forms of exercise include walking, strength training, and spine extension exercises.

Weight-bearing exercise should be part of the osteoporosis prevention program of postmenopausal women. Based on research findings, aerobic exercise that produces high ground reaction forces, such as jogging and stair-climbing, produced significant improvements in bone density. Weight training provides an efficient way to load the clinically important sites (spine, hip, wrist) while also giving the extraskkeletal benefits of improving muscular strength and balance which decreases risk for falls. The few studies investigating the dose-response relationship suggest that high intensity strength training, involving higher weights with fewer repetitions, results in greater improvements in bone mineral density.

Dietary calcium intake must be adequate to support bone formation in order for exercise programs to positively effect bone mineral density. Exercise interventions where calcium intakes were below the recommended 1000-1500 mg per day found bone mineral density decreased after the exercise training.<sup>43</sup> Finally, it also must be realized that exercise by itself cannot substitute for HRT in early postmenopausal bone loss phase. Therefore, women desiring maximum benefits to bone should include all three treatments, HRT (or another anti-resorptive drug therapy such as bisphosphonates or nasal calcitonin), calcium and weight-bearing exercise in their osteoporosis prevention regimen.

### Summary

Osteoporosis is a bone disease associated with reduced bone mineral density and increased incidence of fractures in the hip region and vertebral fractures. In conjunction with bone loss, aging is associated with gait and balance problems which increase risk for falls and subsequent osteoporotic fractures. The American College of Sports Medicine's position stand on osteoporosis and exercise states that weight-bearing activities that increase strength may have important benefits for older women by preventing further bone loss and by increasing strength, coordination, and balance which could decrease risk for falling.<sup>44</sup> It also is recognized that while strength and fitness can be improved at any age, older individuals may not be able to perform exercise at sufficient intensities to protect against bone loss. It is evident that exercise programs for this population should be designed to maximize musculoskeletal benefits while minimizing the potential dangers of high intensity exercise.

Finally, since these exercise-induced adaptations are reversible, it is important for individuals to remain physically active throughout the entire lifespan.

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## Late Onset Angiotensin-Converting Enzyme Induced Angioedema: Case Report and Review of the Literature

Xiong Guo, MD; Lew Dick, MD

Angiotensin-converting enzyme inhibitors (ACEI) such as enalapril, captopril, and lisinopril are well established as effective treatments of arterial hypertension and congestive heart failure. They are widely used and generally well tolerated. Angioedema is a rare but serious adverse effect of ACEI therapy. Most frequently, edema involves the face, oral cavity, and the glossopharyngeal or glottic area. Visceral edema induced by ACEI has also occurred. Life threatening and even fatal cases associated with ACEI have been reported.<sup>1,4</sup> Although angioedema typically occurs within the first weeks of ACEI therapy, some cases with latencies of several months to years have been reported.<sup>1,4,7</sup>

This paper reports a case of late onset and recurrent angioedema in a patient treated with lisinopril for hypertension. A discussion of ACEI angioedema follows.

### Case Report

A 64-year-old black female with a medical history of hypertension presented to the emergency department for the acute onset of the swelling of the tongue and the jaw on the evening of the day of admission. She also reported difficulty with speech but denied trouble breathing. The patient had a sore throat earlier that day. Her husband had given her a single dose of diphenhydramine 25 mg orally, but the swelling of her face and neck continued.

She had no known food or drug allergy and had had no recent changes in medicine. Her current medicines included lisinopril, metoprolol extended release for hypertension, and conjugated estrogens for hormone replacement therapy. She had been treated with lisinopril for six years or longer. Within the last six years, she had two

episodes of similar symptoms. Six years before, the patient had a mild episode of lip swelling, which resolved with diphenhydramine. Two years later, she had another episode of angioedema making her somewhat dysphonic and giving a sensation that her throat was closing. An edematous and erythematous pharynx was noticed by the ER doctor. The patient was treated with diphenhydramine and methylprednisolone in the emergency room and was discharged to home to continue the diphenhydramine and advised to discontinue the lisinopril. Until the day of admission, there had been no other episodes.

On admission, the patient's blood pressure was 237/138, with a respiratory rate of 20, pulse of 94 and temperature of 98.8°F. Physical examination revealed prominent edema of the jaws, submandibular and sublingual area of the oropharynx. The patient could only partially open her mouth. The lungs were clear to auscultation and the heart was regular in rate and rhythm without murmur. The patient was admitted and treated with diphenhydramine and methylprednisolone. The patient was discharged after 24 hours. Amlodipine was substituted for lisinopril and metoprolol extended release was continued. On follow up, the patient indicated that she had had no further angioedema in the three months following the last event.

This case exemplifies late-onset and recurrent angioedema and the fact that episodes spontaneously abated while the patient continued on ACEIs.

### Angiotensin-Converting Enzyme (ACE) Inhibitors and Angioedema Incidence

Angioedema occurs in 0.1 to 0.7 percent of patients on angiotensin converting enzyme

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inhibitors.<sup>2,7</sup> It occurs with any ACEIs with no predilection for any brand. The effect is idiosyncratic and unpredictable.<sup>7</sup>

### **Mechanism**

The mechanism of ACEI-induced angioedema is not yet fully understood. It is thought to be a pharmacological, rather than an immunological, reaction. Angioedema can occur within hours of the first dose, leaving insufficient time for an immunological response to occur. Re-exposure to chemically or structurally different ACEI often results in recurrence of angioedema in patients with ACEI induced angioedema.<sup>2</sup> However, captopril-induced angioedema antibodies to captopril were not found.<sup>7,9</sup> On patients with visceral edema associated with ACEI, biopsy found mucosal edema and vascular congestion without evidence of an eosinophilic or other cellular infiltrate.<sup>15,16</sup>

ACEIs influence a number of biochemical pathways which interfere with the kallikrein-kinin system, leading to an increase of bradykinin and substance P.

Bradykinin is a nonapeptide formed from the inactive precursor kininogen by the enzyme kalli-krein. It is a potent vasodilator, increases vascular permeability, and produces hypotension when injected intravenously in humans. ACEIs can potentiate the effects and can prolong the survival of intradermal bradykinin in animals and in humans. ACEIs also increase the wheal and flare response to intradermal bradykinin in humans.<sup>10,11</sup> It has also been speculated that patients with disturbance of the kallikrein-kinin system such as a deficiency of kininase I may cause angioedema to be elicited in ACEI therapy.<sup>2,12,13</sup> However, patients with idiopathic hyperbradykininism do not suffer from angioedema so bradykinin is not the only mediator of ACEI induced angioedema.<sup>4</sup>

Angiotensin II is a potent vasoconstrictor.<sup>11</sup> Because ACEIs reduce the production of angiotensin II, the net vasodilator effect along with elevated bradykinin levels may potentiate the formation of angioedema. Substance P is a potent vasodilator and inflammatory mediator experimentally shown to induce cutaneous edema.<sup>11</sup> In humans, codeine and histamine-induced flare reactions are not enhanced by ACEIs.<sup>10</sup> Thus it would appear that substance P plays a less important role in ACEI-induced angioedema than bradykinin.<sup>10</sup>

The mechanism by which ACEI-induced angioedema is not fully determined, but it most likely involves increased local levels of bradykinin.

### **Clinical Features**

In most cases, ACEI-related angioedema usually occurs within the first week of treatment.<sup>4,9</sup> Onset of ACEI induced angioedema has been documented up to several years after starting treatment.<sup>1,5</sup> Delay in onset and spontaneous resolution while the patient continues on ACEIs may lead one to wrongfully attribute the episode to another cause. Failure to recognize the association has allowed further, even life-threatening episodes to occur.<sup>5,7,9,12</sup>

Angioedema is frequently recurrent and the severity is variable and may fluctuate as seen in the case we reported. A patient with a mild unreported episode of angioedema may later present with airway obstruction and respiratory distress. ACEI-related angioedema may be fatal.<sup>2,5</sup>

ACEI-induced angioedema has a predilection for the head and neck and most frequently involves the tongue and lips. Periorbital, buccal, laryngeal, pharyngeal and subglottic tissues can also be involved. Edema of the palms, soles or genital area have been rarely reported.<sup>4,7,12,14,20</sup>

ACEIs may also cause visceral edema.<sup>15,16</sup> Patients presented with repeated episodes of abdominal pain accompanied by nausea and vomiting, abdominal distention and sometimes diarrhea or ascites. The episodes started several weeks after introducing the ACEI. In all patients, there was a delay in diagnosis of several months because of confusion with other gastroenterological pathology.<sup>15,16</sup> Besides the spontaneous occurrence of angioedema, additional factors such as drugs or trauma may be potential triggers for some episodes. The mechanism by which these different drugs act as cotriggers is currently unknown.<sup>6</sup>

### **Risk Factors**

Pre-existing angioedema regardless of cause (including chronic urticaria and angioedema) should be a contraindication for ACEI, even if symptoms are mild.<sup>12,17-19</sup> Angioedema occurs with equal frequency in either sex and at any age.<sup>2-4,7,14,20</sup> A higher proportion of middle-aged to elderly patients have ACEI-induced angioedema, but ACEIs are more often prescribed in this age group.

Black patients may be at greater risk than other races. Some authors speculate that may be because black patients tend to have more resistant hypertension and require higher doses of ACEIs and more combination therapy than white patients.<sup>21,22</sup> However, angioedema is usually reported in patients on standard dosages of

ACEIs and there is no clear evidence of a dose-response relationship.<sup>2,3,14,20</sup>

Other possible predisposing factors are pre-existing narrowing of the oropharyngeal space due to obesity, previous neck surgery, neck trauma or sleep apnea which may diminish airway diameter.<sup>1,5,6,13,24</sup>

### Treatment

The ACEI should be withdrawn in any patient who presents with angioedema, no matter how mild or how long after the introduction of the ACEI. Immediate treatment depends on the severity of the episode. The course can be unpredictable and the angioedema may worsen rapidly. There may be a poor response to initial therapy, especially if the angioedema is well established at presentation. More severe rebound angioedema may occur after an apparent initial response.<sup>4,14,17</sup> Therefore, the patient should be observed carefully even with an apparently trivial episode. In a very mild attack, withdrawal of the ACEI may be all that is required.

However, in most cases intravenous antihistamines (H1 and/or H2 receptor antagonist) and steroids are needed, sometimes repeatedly.<sup>4,9,13,14</sup> Inhaled or subcutaneous adrenaline, and in extreme cases, intravenous adrenaline should be given, repeatedly if necessary, to treat airway swelling.<sup>2,4,14,20</sup> Oral or nasal intubation, tracheostomy or retrograde intubation over a guide wire through the cricothyroid membrane may be needed.<sup>2,4,14</sup>

Angioedema generally resolves after 24 to 48 hours and does not seem to recur if the ACEI is withdrawn.<sup>2,4,12,20</sup> It is not advisable to replace the original ACEI with another brand, as further episodes are likely to occur.<sup>2,13,20</sup>

It may be necessary to discharge the patient on a short course of oral antihistamines and a tapering course of oral steroids for up to five days.<sup>4,9</sup> Clear instructions about the avoidance of ACEIs in the future should be given to the patient and sent to other doctors involved in the patient's care.

### Summary and Conclusion

Angioedema caused by ACEI occurs equally in either sex and without age difference, usually in the first week of treatment but a delayed onset is possible. Symptoms may be mild or life threatening. Patients using ACEI should be educated to be aware of symptoms of angioedema and should seek medical help promptly should it occur. Visceral edema associated with ACEI has been documented as well. The mechanism is pharmacological, rather than immunological, so ACEI should be stopped instead of being

replaced with another brand of ACEI. In most cases, intravenous antihistamine (H1 and/or H2 receptor antagonist) and steroids are needed. Intubation may be needed in severe cases.

Previous history of angioedema is a contraindication for ACEI. Narrowed oropharyngeal space secondary to obesity, a history of neck surgery or neck trauma may be considered risk factors. J

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# COMMENTARY

## A Return to Basics: Family Medicine as a Counterculture

J. Michael Pontious, MD

### Introduction

As a medical student, I remember thinking about where I would end up on my medical pilgrimage. I am still unsure that I have made the correct decision, even some 16 years into residency and practice. Even though I am more experienced, even though I now serve as a teacher of medical students and family practice residents, I continue to be confused. I continue to be unsure that this has been the correct path.

As our country has now gone through the most recent cycle of primary care adulation, the pendulum is swinging back to the more narrowly defined specialties. The cynic in me wants to blame this on greed and ego. Here in Oklahoma, patients continue to have difficulty understanding exactly what it means to be identified as a family physician and what it is specifically that family physicians do.

I, for one, have fatigued at trying to explain it.

I have become "just a doctor," and we leave the conversation there.

I am asking, with this article, that you allow me to take a moment and publicly discuss the treacherous world that confronts those of us in primary care.

Although it is often painful to see one struggle with the weighty questions in public, as physicians we must stop and question the "what" and the "why" of our chosen profession.

### Understanding Family Practice as a Health Care Role

Much has been written about the role of family practice in the current healthcare environment.<sup>1-4</sup> The labels and roles have evolved from the diverse corners of the universe, television images of physicians, as well as public perception.

Marcus Welby, MD, a gray-haired, all-knowing, all-caring, all-advocating physician, who was portrayed as a community white knight, who cared for everyone and taught his young motorcycle riding colleague the "lessons of life" during their practice in their ideal community. The image is dated, but for many of my patients this continues to be the image that "family physician" brings to mind. That is to be contrasted with the fast-paced lives of emergency physicians on "ER" and the life saving careers of hospitalists on "Chicago Hope."

Is it just that I am jealous because the mundane life of the family physician has failed to make the television schedule in 1998?

The image that seems to be developing on the third party payor agenda is the image of the family physician as the pawn in a large chess game. In a way, the chess pieces are all images of Camelot, that wonderful place that all worthy physicians strive to attain. In this game of chess, the family physician role is that of a pawn.

I have envied physician colleagues for their ability to play chess. Because I am not a chess player, these physicians have helped me understand the role of each piece. The pawn is the lowly, first contact, utility hitter. The one to be sacrificed on the front line. Yet these vintage players reassure me that a good chess player realizes the value of a pawn. They tell me, in the great scheme of things, pawns are of importance. Is this not the role of the generalist in medical traditions? Shouldn't I be satisfied to be a valued member of the "great scheme of things?"

For some, the family physician is the first barrier, used only as a conduit or gatekeeper, keeping patients from their beloved specialist. The generalist is used as a stumbling block to keep deserving patients from their medical

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Camelot. The medical system, program, or product uses the family physician as a pawn in their battles with other systems, programs and products. And then there is the pawn role that allows the system to put the economic vice on the specialist charge structure.

Pawns are poorly valued by all of these other players. On a daily basis, I wake up trying to understand why my position has changed and why I then am responsible for explaining this "change" to everyone concerned. The hostile patient, the "bottom-line" insurance company, and the "why are you doing this to me" specialist, each has an agenda which is discordant with the generalist's view of primary care.

Yet I am expected to be the apologist.

So the family physician faces the dilemma. Not enamoured with either image; one is too nebulous and idealistic, the other is too utilitarian. As a medical discipline, we have allowed our breadth of training and skills to be used against us; we have been subverted from our mission and our appropriate position in the medical establishment.

### **Understanding Family Practice as a Counterculture**

The movement of Family Medicine began as a counterculture.<sup>5</sup> Full of idealism, the specialty was a reaction to the disillusionment with the medical establishment and distrust of the status quo. There was a generation of family physicians that had misgivings with the conventional wisdom of medical education and demanded another path. They chose the generalist path, chose to practice a social medicine, chose to abandon the subspecialist model of training.

The choice of my words is on purpose. The concept of choosing is an accurate one. I find that I grow weary of spending my time teaching those who look at my clinical discipline as a "fall back." I am militant about making sure that the students of my discipline understand and buy into the generalist's path. The work is too hard and the path is too anxiety-provoking for those who see this as a "fall back." This is no place for those who can't do anything else; for those who need a safety net. We dishonor our predecessors, who developed this family medicine path, when we accept students and residents who are motivated by this safety-net mentality.

It is not socially acceptable to listen to my opinion regarding the retraining of specialists for the practice of primary care.<sup>6,7</sup> It is my opinion that "they just don't get it." That is not to say

that my specialist colleagues are intellectually inferior, nor unable to understand. Yet the precepts of clinical medicine train specialists to value different tenets, while they never quite recover from the selection bias that confounds (and pervades) their clinical experience and training.

The bottom line is that we are currently involved in an experiment to see if this primary care model will survive and fulfill the expectations and dreams of those that have prepared the way. As with many counterculture movements, the system is set up to maintain the status quo, to resist innovation, to resist the ability to think and practice "outside of the box." Nowhere is this more evident than in our academic institutions.

Is this counterculture a bump in the road or is it the innovation needed for the future?

Those of us who trained as family medicine residents in this state have benefited from this counterculture movement. Yet there are continued attacks on the model, restrictions on privileges and narrowing of the clinical skills that are being taught in our residency programs. And then there is the continued challenge to articulately explain the process and phenomena to hospital administrations, insurance companies, specialist colleagues, as well as patients.

I will not abandon the role of being a member of the counterculture. I am continually challenged to educate all segments of the health care system about the family physician's role and motivation.

Through it all, I find the purest and most effective approach is to practice excellence in patient care.

### **Medicine as a Sacred Trust**

I am continually reminded that we have entered a profession of enormous privilege. Yes, there will be financial security, there will be social status, and there will be a deference that will come with the degree and board certification that follows our name. But is this enough? Or more precisely, is this what gives meaning to our work?

Patients — at least some patients — will invite you into a truly intimate relationship. It is not by accident that throughout our history, priests and physicians have often been interchangeable. In our secular education, this concept goes by many names, in our attempt to scientifically define the process. We call it biopsychosocial insight, behavioral medicine, social medicine or community-oriented primary care,

when in essence it remains a holy trust.

From one who has been there, the things that separate family physicians from other clinicians is this behavioral portion of our training. You must hold on to it: it allows you to be a more insightful clinician; it allows you to practice our profession with honor; it allows you to maintain a perspective that permits you to shoulder the burdens that your patients lay at your feet, without tripping or becoming cynical.

So what then is a physician's responsibility to their patient and what is the responsibility of the profession to society?

During the pilgrimage from medical school to residency to practice, each of us has witnessed modification in our style of medical care delivery. Under the rubric of managed care, we are part of the system that offers efficient, outcome based medical care to our insureds.

But is that enough?

This sounds so clean, and yet I continue to worry that this concept is inherently evil. I continue to worry that it transforms my discipline from a profession into a business. An example of the evil would be our failure to advocate for medical access for those in our society that are disenfranchised, poor or uninsured.

All of us have received a subsidized medical education. All of us have depended on patient populations that could not afford a more experienced physician to provide their care. Typically, as we graduate from residency programs, we abandon this group of patients for the more lucrative field of the insured patient. It is not a new problem; it is only intensified in this world of "bottom-line managed care."

As a profession, we must continue to advocate for access. Do this by mentoring your "system" behavior and your inclusion of this type of patient in your practice. By this action, we, as a profession, rise above the bottom line as the only component of making medical decisions.

And finally, there persists nagging concerns about this counterculture movement of family practice. As an educator, it is obvious that the norms are changing, as recently trained residents leave for positions as employees in for-profit institutions. In a time where this has become the norm, it may seem odd to even ask the question. But is this an appropriate manifestation of the counterculture? We have come a long way down this road, even during the span of my career. As an individual, I worry that the direction we are proceeding is incorrect.

Some have recently written that medicine, as a profession, has professed a responsibility to

our patients that went beyond our own needs and wants.<sup>8</sup> And yet the most significant change in modern medicine has been this mutation from physician as professional to the physician as employee.

Has there been public discussion about the effect of this move on the profession?

It is imperative that this type of change does not become entrenched without asking the critical questions individually, corporately and socially.

## Conclusion

I am anxious about the future for the physicians of Oklahoma. It does not center on the short-term fall in income or loss of political power. Rather, it centers on our loss of focus and understanding of our calling.

Asking questions is always so much easier than providing answers. At this stage of my career, I sense that the answers will need to come from my current residents. Those of us who see ourselves as the counterculture are looking over our shoulders at those who follow behind us. Physicians like myself have done what we can to pave the way. We have knocked down some of the barriers. We have attempted to articulate society's need and outline the approach.

But, alas, it is not enough.

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## **17-Year-Old Female with IgA and Abdominal Pain: A Clinicopathologic Correlation Conference from the University of Oklahoma College of Medicine**

Sabrina Olay, MD; Osbert Egiebor, MD; Philip Rettig, MD; Sarah Johnson-Welch, MD

### **Case Presentation** **Sabrina Olay, MD**

The patient was a 17-year-old female with chronic renal insufficiency secondary to IgA nephropathy. She was admitted to the hospital with a two-day history of fever, abdominal pain and vomiting.

Three and one-half years prior to admission, the patient was noted to have hematuria, decreased creatinine clearance, and increased urine protein excretion. She had normal C3 and negative ANA. The patient was placed on mild sodium restriction but no medications.

In January 1994, a renal biopsy revealed IgA nephropathy with focal global and segmental glomerular sclerosis, interstitial nephritis and subendothelial deposits. Prednisone was then prescribed. Enalapril and furosemide were added for hypertension. Low estrogen oral contraception was added later. Two years later patient's serum creatinine increased to 2.6 mg/dl and she had lost weight. She was found to not be taking the prednisone.

Two weeks after restarting the prednisone, the patient presented with the complaint of abdominal pain. She had a diffusely tender abdomen, thrombocytopenia, and elevated serum amylase and lipase. Blood cultures were obtained, Ceftriaxone was administered, and she was referred to Children's Hospital.

Further history revealed the patient had an earache five days prior to admission and was treated with amoxicillin and ear drops. She also reported fever to 39° C and a sore throat two days prior to admission. Twenty-four to 36 hours prior to admission, the patient developed abdominal pain and on the day of admission she

had numerous episodes of emesis and two loose stools. Admission temperature was 37.9°C, heart rate 100 and respiratory rate 20. Blood pressure was 120/80 and weight was 49 kg. She appeared ill and had slight pallor. Her abdomen was soft, non-distended, and tender predominantly in the left upper quadrant. Peritoneal signs were absent and bowel sounds were hyperactive. Abdominal radiographs, flat and upright, revealed a few air fluid levels suggesting early ileus. The differential diagnosis at that time included viral syndrome, pancreatitis and sepsis. The patient was given intravenous fluids, but nothing by mouth. Admission laboratory studies were remarkable for a left shift, an elevated blood urea nitrogen and creatinine, and markedly elevated liver enzymes.

Seven hours after admission, respiratory difficulties were noted; resuscitation was initiated. After one hour, cardiac rhythm stabilized. Marked coagulopathy and severe anemia were noted and persisted despite one unit of fresh frozen plasma, six units of cryoprecipitate, six units of platelets, and four units of packed red blood cells. The patient remained hypotensive despite maximal vasopressor therapy and became unresponsive to all stimuli. The patient was pronounced dead approximately 12 hours after admission.

### **Radiology** **Osbert Egiebor, MD**

An AP chest radiograph was obtained after the patient was intubated. The endotracheal tube tip was at the level of T3 which is satisfactory. There was a right subclavian venous catheter with the tip in the confluence of the right atrium

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and inferior vena cava. There were extensive densities involving both lungs, more marked on the right than left. On the left there was some focal scarring of the base. Heart size was normal. This appearance is nonspecific and could represent pulmonary edema, pulmonary hemorrhage or pneumonia. At admission, an abdominal flat plate radiograph, obtained in the supine position, demonstrated paucity of bowel gas, with few loops of nondilated bowel in the left lower abdomen, pelvis, and stomach. No abnormal calcification was noted. A radiograph obtained in the left lateral decubitus position showed no abdominal free air.

### Discussion

#### **Philip Rettig, MD**

In summary, this was a 17-year-old girl with a three and one-half-year history of IgA nephropathy who presented with hyperacute fulminant hepatic failure, which was rapidly fatal. Over the three years following her initial diagnosis of IgA nephropathy, she had a clinical course marked by moderate renal insufficiency. During this time, she was exposed to multiple medications, some of which might have been hepatotoxic. She experienced onset of sexual activity, which might have exposed her to infectious organisms or otherwise contributed to her morbidity. Finally, her prodromal illness for the terminal event was an earache five days before, for which she received amoxicillin. She additionally may have received over-the-counter antipyretics or analgesics, which might be hepatotoxic. She then had a two- to three-day history of fever and abdominal pain with some emesis, followed by a rapid clinical deterioration. Seven hours after admission, she arrested. Twelve hours after admission, she was dead. This terminal event was marked by severe coagulopathy with very elevated fibrin split-products, very low fibrinogen, and basically unmeasurable PT and PTT, with a platelet count of 59,000. She had marked transaminase elevations with an ALT peaking at 14,000 and AST at 10,000. She had profound anemia with a drop in her hemoglobin from 11.9 to 3.5 grams over a period of several hours. She had refractory hypotension which might, in part, be related to problems with autoregulation due to her failed liver or to overwhelming sepsis. She rapidly became comatose and died.

First, I will briefly discuss the IgA nephropathy. This is the most prevalent form of nephritis in adults worldwide, with geographic variation; it is by far the most common form in France,

Italy, Japan, and Australia, but is seen in only about 2 to 10 percent of patients with chronic nephritis with glomerulopathy in the US and UK. It is more common in males than females. When we see it as pediatricians, we usually regard it as a benign illness. But IgA nephropathy in adults isn't such a benign disease and may progress to chronic renal failure over a decade or so in 20 to 50 percent of patients. This patient would probably follow an "adult" prognosis, by virtue of her age at onset of 14 years and in light of her biopsy findings. The pathology that she displayed in her initial biopsy with focal-global segmental glomerular sclerosis and interstitial nephritis is consistent with this. Mesangial deposits of IgA are usually seen early in the illness. One may see mesangial hypercellularity, and then, as time goes on, the hypercellularity seems to disappear and there is an increase in the mesangial matrix as patients develop renal failure. This entity was first described in 1968 by Berger and Hinglais as benign IgA nephropathy with hematuria. Particularly in adults, it may not be so benign.

There are a number of secondary forms of glomerulonephropathy that may be manifest by IgA deposition but are associated with multi-system diseases, including lupus, anaphylactoid purpura, occasionally cystic fibrosis, (particularly with concurrent liver disease), and celiac disease. In adults, this pattern has been associated with neoplasia, particularly colon and lung cancer, mycosis fungoides, and non-Hodgkin's lymphomas, none of which I think this patient was likely to have had. IgA deposition has occasionally been associated with a variety of infections, including mycoplasma infections, leprosy, and toxoplasmosis. Finally, the only secondary form that really might be relevant to this case is the association with chronic liver disease, primarily in adult patients who have IgA deposition in the mesangium. Usually, this is observed in patients who have on-going chronic liver disease, and the nephropathy is relatively silent and asymptomatic. However, I really don't think there is any direct link between her IgA nephropathy and her subsequent hepatic failure, except possibly for the fact that she was being treated with prednisone.

The history and physical provided in the case protocol are both somewhat sketchy, in part because she arrived at the hospital at night, was very acutely ill, and then arrested so rapidly that a really detailed history was never obtained. I would have liked to have known if there was a family history of liver disease. Was there a pos-

itive exposure history? Did anybody else in the family have hepatitis? Was anybody else in the family sick in the previous month? Did she have any known sexually transmitted diseases? Has she had any genital ulcers or vesicles? Might she be pregnant and might complications of pregnancy somehow be related to this? Was she ever transfused? Had she been tattooed or had body piercing, particularly by an amateur who might have used unsterile technique? Had she traveled anywhere?

Finally, I would like to know more about what drugs she might have been exposed to. Was she exposed to any over-the-counter medications during the previous five days after her earache started? Specifically, did she take acetaminophen, which we know can be hepatotoxic, or aspirin which can also be hepatotoxic, or even other NSAIDs, which occasionally can be? Was she taking her regular prescription drugs? Were there any other drugs we are not aware of that she had been given by other physicians? Had she used any illicit drugs? Finally, did she use ethanol?

I would like to know more about her physical exam. Did she have stigmata of chronic liver disease? Was her liver enlarged? Was her spleen enlarged? Was she jaundiced? This might give you some clue as to how high her bilirubin was or how massive her hemolysis might be. Did she have any skin lesions, particularly mucosal? Finally, were her eyes examined for Kayser-Fleischer rings? These deposits of copper in the outer limbal area of the cornea when seen are highly suggestive, although not pathognomonic, of Wilson's disease.

The way I approached this case was to ask, first of all, what causes acute hepatitis in a 17-year-old? Secondly, what things might cause chronic hepatitis (although I don't think she had chronic hepatitis)? Finally, which of these conditions might cause fulminant liver failure? Each list is going to be a little different. Statistically, the most likely cause of hepatitis in central Oklahoma right now is hepatitis A, because of the on-going epidemic. But with recent onset of sexual activity or possibly other high-risk teenage-behaviors, you would have to wonder if she might have been exposed to hepatitis B. Hepatitis C is an unlikely cause of acute hepatitis; it is much more likely to cause chronic hepatitis. Of the herpes viruses, the one most likely to produce acute hepatitis in a 17-year-old is Epstein-Barr virus. Rarely, herpes simplex might cause hepatitis in an otherwise healthy individual. Other infections, including

bacterial processes such as leptospirosis, or secondary syphilis, can present as hepatitis. In a teenage female, I would be concerned not only about hepatitis, but about perihepatitis, if she had a history of right upper quadrant pain associated with just mild elevation of transaminases. Occasionally, other bacterial infections can produce so-called toxic hepatitis, including group A strep infections and *E-coli* urinary tract infections for another. Might she have had something noninfectious? Chronic active hepatitis, better termed autoimmune hepatitis, can present acutely. Often presenting at this age is Wilson's disease. Alpha-1 antitrypsin deficiency usually has its hepatic manifestations in infancy or the first decade of life, but it might rarely present as acute hepatitis in a teenager.

Finally, there is the issue of drugs or toxins. She had been on a variety of drugs to treat both the complications of her renal insufficiency and her other medical needs. Enalapril can be associated with mild elevation of liver function tests and occasionally cholestasis, but this occurs in less than one percent of patients taking the drug. Oral contraceptives, the combination of estrogen/progesterone, can occasionally lead to mild hepatic dysfunction, usually with a cholestatic picture. Likewise, furosemide and amitriptyline very rarely can cause abnormal liver functions.

If she were pregnant, she might have fatty liver of pregnancy. If she has hepatitis due to herpes simplex, pregnancy may predispose to severe disease. Finally, if she had hepatic adenoma and were pregnant, there can be severe, sometimes fatal, hemorrhage into these tumors, either during the third trimester or shortly postpartum.

Finally, we know that she was taking prednisone. If she were immunosuppressed by her prednisone, she certainly could have more aggressive hepatitis B as a cause for her hepatic failure. I would add a list of viruses usually seen in infants that normally wouldn't be associated with hepatitis in this age group, but have been reported in immunocompromised older children and adults. Multisystem adenoviral disease, particularly due to adenovirus 7 or 11, Coxsackie B virus infections, and echovirus infections, particularly echo 11, all have been associated with viral sepsis that includes an element of severe hepatitis. If she were immunocompromised, a number of herpes viruses could cause symptomatic hepatitis, including herpes simplex virus, EBV, potentially CMV (usually as part of a more generalized CMV picture), or varicella-zoster virus.

Could she have had chronic hepatitis and then something else on top of it? The lab results in the protocol suggest that, on several occasions prior to September 1996, she had normal liver function tests, so I think that all the causes of chronic hepatitis can be discounted.

Table 1 summarizes the causes of fulminant hepatic failure, defined as onset of hepatic encephalopathy within eight weeks of beginning symptoms of hepatic dysfunction, in the absence of preexisting liver disease. What might cause fulminant hepatic failure in a 17-year-old who had chronic renal disease, was on prednisone, but was otherwise fairly healthy? First of all, we should consider the hepatitis viruses. In this country, currently non-A non-B virus is the most common cause of fulminant hepatic failure due to a hepatitis virus. Hepatitis B may still be a cause, but with screening of blood supplies and use of hepatitis B vaccines, is relatively uncommon. Delta agent infection or hepatitis D, either concurrently with a new hepatitis B infection or as a superinfection of pre-existing hepatitis B, can be a cause of fulminant hepatic failure. Hepatitis A in this country is a very uncommon cause. But in areas where hepatitis A occurs with high prevalence, it is a relatively common cause of fulminant hepatic failure. Finally, hepatitis E may cause fulminant hepatic failure in pregnant women in areas of the world where this virus is endemic.

Then there are the herpes viruses. The two that would likely lead to fulminant hepatic failure would be herpes simplex and EBV. Most cases due to EBV have occurred in males who have the X-linked lymphoproliferative disorder associated with ongoing evidence of infection with EBV outside of the liver.<sup>1</sup> Recently, there have been several case reports of patients with fulminant hepatic failure and evidence by PCR of liver tissue of acute infection with parvovirus B19, the agent of fifth disease.<sup>2</sup> Finally, bacterial infections with overwhelming sepsis may lead to massive hepatic failure, either directly via "toxic" effects or secondary to ischemic hepatitis. The processes included in this list would be toxic shock syndrome due to either group A strep or to staphylococcus aureus, meningococcemia, or gram negative enteric sepsis.

Finally, there are noninfectious causes of fulminant hepatic failure: Wilson's disease, autoimmune hepatitis, and drugs or toxins. None of the drugs that we know she was exposed to are likely causes of fulminant hepatic failure. There is no history of ingesting mushrooms, which can lead to massive liver necrosis. One would have to

wonder about acetaminophen. Acetaminophen poisoning with fulminant hepatic failure can occur in two forms: due either to chronic overuse or to massive overdose.<sup>3</sup>

One possible clue is the severe terminal anemia. Her hemoglobin declined from 11 to 3 grams in a period of several hours. A manifestation of Wilson's disease is hemolytic anemia, which can be severe. Aplastic anemia can complicate fulminant hepatic failure; this may occur prior to the onset of liver failure, or actually be manifest only after transplantation. This has been most commonly associated with non-A, non-B hepatitis, hepatitis B, and parvovirus. But I don't believe she had aplastic anemia; she didn't have time to develop that. But she might have had a hemolytic process contributing to her anemia.

I will now discuss the three most likely causes of her fulminant liver failure. Given the facts that she was female, a teenager, and had no obvious exposure to any infectious causes, one possibility would be autoimmune hepatitis. Although this disorder usually produces a more chronic hepatopathy, rather than such fulminant failure, there is one report several years ago of three infants who developed fulminant hepatic failure, had very high levels of liver/kidney microsomal antibodies, and a presumptive diagnosis of autoimmune hepatitis.<sup>4</sup> An associated finding which might be expected is hypergammaglobulinemia, which she never had. And it is unlikely that a patient would develop acute fulminant autoimmune hepatitis while on prednisone.

My second candidate cause would be Wilson's disease, an autosomal recessive disease of copper metabolism. The most common clinical manifestation is chronic hepatitis, but Wilson's disease can present as fulminant hepatic failure without previous liver disease. The biochemical abnormalities consist of low serum copper, high urinary copper, decreased serum ceruloplasmin, and increased liver copper. Obviously, we don't have information of any of these measurements. We have some clues both for and against the possible diagnosis of Wilson's disease. The first is her dramatic drop in hemoglobin. She may have had hemolytic anemia, which is a non-antibody-mediated process in Wilson's disease. Absent is a subnormal alkaline phosphatase or low alkaline phosphatase to bilirubin ratio.<sup>5,6</sup> Her ratio certainly wasn't low.

My leading candidate for this patient's disease process is herpes simplex infection leading to fatal hepatitis. The reasons for my choice are

her underlying immunosuppression and the incredibly acute, rapid demise with uncontrollable DIC, which is characteristic of HSV infection. In a 1987 review of 30 cases of HSV-associated hepatitis in adults,<sup>7</sup> nine of the 35 occurred after renal transplantation. Nine occurred in patients on immunosuppression not related to transplantation; most of these latter patients were on prednisone. Another nine patients were pregnant. These patients rarely had cutaneous herpes, but the majority had mucosal lesions in the mouth or genital area; however, these might not be readily appreciated in a critically ill patient. HSV hepatitis is associated with fulminant DIC and a rapid fatal course. The case fatality rate is in the 80 to 90 percent range, even with acyclovir therapy.

I think the most likely diagnosis, absent any history of exposure to infections like hepatitis B or non-A non-B and given the clinical picture, is that she had herpes simplex virus infection. She might well have acquired this at the time of her recent onset of sexual activity. I wouldn't be surprised if at autopsy she had some genital lesions not previously noted. I would predict that Dr. Johnson will show us massive hepatic necrosis with viral inclusions due to herpes. She might well have associated adrenal hemorrhage and adrenal necrosis, something commonly seen in neonates with overwhelming herpetic infections. I predict that she has cerebral edema due to her hepatic failure and that she might well also actually have an intracranial hemorrhage. I would hypothesize that her drop in hemoglobin is due to her DIC and to bleeding either into her gut, her lungs, or possibly into her cranium. She will also exhibit pathologically the pre-existing IgA nephropathy which was contributory to her demise only in that she was on prednisone.

## Pathology

### Sarah Johnson-Welch, MD

At autopsy, the kidneys had finely granular surfaces caused by microscopic foci of active glomerulonephritis and scarring, as seen in the previous diagnostic biopsy, interspersed with more normal parenchyma. The patient's IgA nephropathy, however, was not a major component of her terminal illness.

The liver showed diffuse hemorrhage; its cut surface had the same deep maroon color as the spleen. There was no body cavity or intracranial hemorrhage; any terminal bleeding had occurred into the liver itself. There was no large mass, as would be seen with a tumor; no multi-

**Table 1. Causes of Fulminant Hepatic Failure in a 17-Year-Old Female**

#### A. Infections

|                      |  |
|----------------------|--|
| Hepatitis Viruses    | Non A - Non B<br>Hepatitis B<br>Hepatitis D + B<br>Hepatitis A<br>Hepatitis E (with pregnancy) |
| Herpes Viruses:      | HSV<br>EBV   |
| Parvovirus B19       |  |
| Bacterial Infections | Toxic shock syndrome(s)<br>Meningococcemia<br>Gram-negative sepsis                             |

#### B. Drugs/Toxins

Mushroom poisoning  
Acetaminophen  
Halothane  
Salicylates  
Ferrous sulfate  
Isotiazid  
Valproic acid  
Propylthiouracil

#### C. Other Causes

Wilson's disease  
Autoimmune  
Ischemic necrosis  
Acute fatty liver of pregnancy

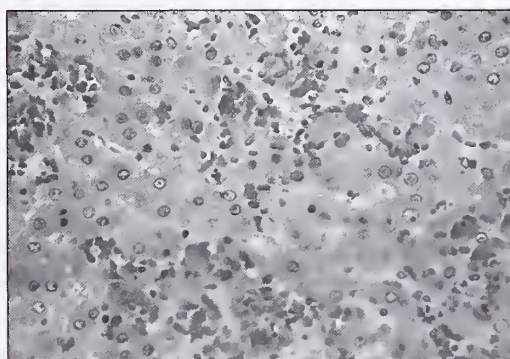


Figure 1. Liver magnified 25×

ple small masses such as metastatic cancer or blood borne infection; and no "nutmeg" pattern reflecting zonal necrosis.

Histology of the liver revealed hepatocytes with single or multiple nuclei containing inclusions typical of herpes virus, varying from the early Cowdry type A with chromatin margination, to the later Cowdry type B with a well-defined central inclusion. (Fig. 1) The inclusions reacted strongly with specific antibodies against herpes simplex. (Fig. 2) Microscopic foci of infection were found in the adrenals, also

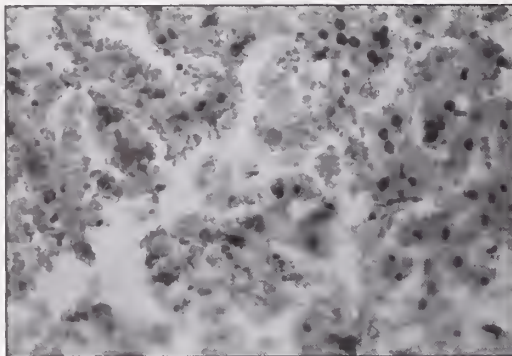


Figure 2. Liver magnified 25×

associated with hemorrhage, but in none of the other organs. Herpes simplex type 1 was cultured from blood, from frozen liver tissue, and from lung.

Herpes simplex virus hepatitis is only one of the many forms of herpes infection. Skin or mucous membrane inoculation is seen in immunocompetent hosts, as is extension of oral cavity disease into the respiratory or digestive tract. Disseminated disease, including hepatitis and hepato-adrenal syndrome, is more commonly seen in immune-suppressed patients, in pregnant women and in infants; in the latter two groups, of course, the changes in the immune system are physiologic and not pathologic. Nevertheless, herpes hepatitis can occur unexpectedly even in the immunocompetent. Analysis of presenting symptoms in non-immunosuppressed patients shows that fever, coagulopathy, abdominal pain and CNS problems are frequent in the initial presentation, as well as acute viral syndrome of arthralgias, myalgias, fever, possibly upper respiratory symptoms and headache. Presenting symptoms are not necessarily directly related to hepatitis and thus offer no clue as to what will ensue. Our patient's illness with earache less than a week before her death may actually have been the onset of the herpes infection which culminated in hepatitis.

When liver enzymes are obtained, there tends to be marked elevation of the SGOT and other enzymes with modest elevation of bilirubin. Our patient thus demonstrated an anicteric liver necrosis, a presentation that may offer an important clue in the differential diagnosis of elevated liver enzymes in pregnancy.

Herpes hepatitis, which has an 80 to 90 percent mortality rate, can be successfully treated. Once there is a clinical suspicion of the disease, acyclovir can be started presumptively; a liver

biopsy can show histological viral inclusions even on frozen section, and rapid confirmatory staining is available.

**Question: Were there ever any herpes lesions found on the patient?**

**Answer:** Not on admission or at autopsy, but after the diagnosis was made, the patient's mother remembered that the patient had complained of some sore areas inside her mouth about a week before admission. The family had thought these were due to her biting the inside of her mouth; these may or may not have been herpes lesions.

**Question: Is disseminated herpes always associated with primary infection?**

**Answer:** Bone marrow transplant recipients tend to get disseminated disease from reactivation. Neonates, of course, have a primary infection. Probably more cases in immunocompetent individuals result from primary infection. □

#### The Authors

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## OSMA seminars focus on the evolving needs of the health care community

The Oklahoma State Medical Association presents the 1999 schedule of educational seminars that will cover the latest guidelines to strengthen your position within the health care community. Topics have been expanded to include investment counseling, communications for physicians and employees, and Internet access.

All physicians and staff are welcome. Registration information (listing locations and price) will be mailed before every seminar for your convenience. For more details, call Michele D. Smith at the OSMA Headquarters at 405/843-9571 or 800/522-9452.

### 1999 OSMA Member Services Seminar Schedule

#### Computers Made Easy

Feb. 10-11: OKC

Feb. 10-11: Tulsa

*New Horizons*

New Horizons will conduct a six-hour class on the basics, including the functions of the computer, the difference between RAM and ROM, basic types of programs such as Word, Excel, PowerPoint, and what those programs do.

#### Introduction to the Web/

##### Electronic Mail

Feb. 24-25: OKC

Feb. 24-25: Tulsa

*New Horizons*

New Horizons will conduct a six-hour introductory class on browsing the web, searching and retrieving, using electronic mail, newsgroups and power use.

#### Managing Managed Care

##### Liability

March: OKC and Tulsa

*AMA/Hartzog, Conger & Cason*

All providers are exposed to new types of liability. This seminar will focus on antitrust liability, credentialing liability, sources of utilization management standards, types of utilization management and ERISA exemption to help you understand the risks in order to protect yourself.

#### Compliance Program - Legal Introduction

May: OKC, Tulsa and Ardmore

*Doane Harrison & Mark Price*

This seminar concentrates on the legal aspects of compliance programs and is an introduction to the need for compliance programs and enforcement initiatives, compliance program components, management responsibilities, policies and procedures, billing and coding compliance, structural/organizational issues and more.

#### Office Procedures

August: OKC and Tulsa

*Harrison Peck*

Harrison Peck will discuss good internal control procedures and streamlining the practice of "Re-engineering."

#### Investment Counseling

September: OKC and Tulsa

*James Baker & Assoc.*

James Baker & Associates, OSMA's newest preferred vendor, will provide details on all the investment portfolio management options they offer (and the special offers for OSMA members).

#### Communications: Physician, Employees, Public Relations

October: OKC, Tulsa and Lawton

*Public Relations Firm*

This seminar will discuss effective communicating for physicians, employees, human relations and public relations.

#### Reception & Patient Flow

November: OKC, Tulsa and Lawton

*Conomikes*

This program is designed to help medical office personnel, especially those involved with the front desk, with a focus on improving patient service, cutting down on "lost" charts, telephone procedure checklists and more.

### Important Dates to Remember

OSMA Annual Meeting  
April 15-18, 1999  
Southern Hills Marriott

OSMA Board of Trustees  
April 15, 1 p.m.

Opening Session  
OSMA House of Delegates  
April 16, 8:30 a.m.

Closing Session  
OSMA House of Delegates  
April 17, 9 a.m.

## E & M Codes Take Center Stage at AMA Meeting

At the AMA Interim Meeting of the House of Delegates held Dec. 6-9 in Honolulu, the House received a thorough update on the ongoing negotiations between the AMA and HCFA regarding the development of acceptable Evaluation and Management (E&M) Documentation Guidelines for Medicare services.

In the wake of these reports and discussions, **the AMA House reaffirmed the association's policy of strong opposition to numerical counting formulas in Medicare's E&M Guidelines.** The House also acted on a variety of other resolutions relating to the guidelines, which have created controversy among physicians:

- Responded decisively to physician outrage regarding the unfair enforcement of Medicare fraud and abuse rules, adopting a "clear and unambiguous" statement that the "honest physicians of America have had enough and will no longer stand for petty harassment by auditors or for being falsely accused of abusive and fraudulent behavior."
- Demanded major changes in Medicare pre-payment and post-payment review programs that would require that physicians receive due process and accurate and clinically informed review of their services.
- Called for well-designed pilot tests to assess any new E&M guidelines before any possible implementation by HCFA.
- Reaffirmed the AMA's efforts to advance other alternatives to numerical guidelines as a basis for coding review, including peer review of statistical outliers.

## AMA Meeting Highlights

The AMA House of Delegates adopted a comprehensive report addressing recommended changes in the AMA's structure, governance and operations, with the following highlights:

- The goals of the AMA Strategic Plan should become an overarching part of all Board and Council meetings, with all new initiatives and emerging issues regularly measured against the plan.
- AMA Bylaws will be amended -- 1) to include a Chair and Chair-Elect as officers, each limited to a single one-year term, with the Chair-Elect automatically succeeding to Chair; 2) to preclude the Chair from immediately running for the position of President-Elect; 3) that no AMA officer or trustee shall be eligible to serve as Executive Vice President within three years of leaving office.
- The Speaker and the President should establish a committee of the House to determine the structure of compensation and to establish the amount of compensation for the Board of Trustees annually. The committee will provide an informational report annually to the House.
- In response to a report from the Council on Long Range Planning and Development, established a special task force of the House to develop a detailed plan to transform the Federation of Medicine into a more cohesive, collaborative, competitive environment for physicians. Mary Anne McCaffree, MD, OSMA President, was appointed to serve on this special committee.
- Adopted a substitute resolution calling for the AMA to strongly oppose any bill to legalize physician-assisted suicide or euthanasia.
- Adopted a resolution directing the Council on Scientific Affairs to study the issue of violence in schools and the efficacy of school-based violence-prevention programs.
- The AMA launched a major national campaign to raise awareness of the need for organ donors. Based on the Texas Medical Association's "Live and Then Give" program, the initiative includes a video, brochures and other educational materials.
- Adopted a resolution stipulating that the AMA work with JCAHO, HCFA, state legislatures, regulating agencies and other accrediting groups to ensure that there are no conflicts among standards and their interpretation and that the AMA work to ensure that accreditation remain in the private sector, and not become a function of government.

**OSMA AMA Delegates:** Back left to right (l-r): Norman Junitz, MD; Sanku Rao, MD; Jack Beller, MD; Jay A. Gregory, MD; Perry Lambird, MD; Mukesh Parekh, MD; Carl Hook, MD; William Bernhardt, MD. Front left to right: Bruce Storms, MD; Greg Ratliff, MD; David Harper, MD; W.F. Phelps, MD; William Hall, MD; Mary Anne McCaffree, MD; Gary Trebel, MD (not pictured: Patrick Lester MD).



## AMA ACTION ON OKLAHOMA RESOLUTIONS

The AMA House of Delegates took the following actions specific to resolutions introduced by the Oklahoma Delegation:

### RESOLUTION 3 - PATIENT CONFIDENTIALITY

HOD ACTION: Referred Resolution 3 to the Board of Trustees.

RESOLVED, That the AMA investigate the escape of confidential patient information outside the doctor-patient relationship, and determine if this violates the meaning of policy 120.981 (1)(e) or any CEJA positions, and report to the HOD in A-99.

### RESOLUTION 4 - CONFIDENTIAL PATIENT INFORMATION TO FOURTH PARTIES

### RESOLUTION 9 - LEGALITY OF FEDERAL AGENTS

HOD ACTION: Adopted Substitute Resolution 4 (in lieu of Resolution 4 and Resolution 9.)

RESOLVED, That the AMA investigate, and challenge where appropriate, the authority of federal agents (including armed law enforcement agents) to obtain confidential patient information in the absence of appropriate search warrants.

### RESOLUTION 120 - WITHDRAWAL FROM NEGOTIATED RULE-MAKING IN REGARDS TO MEDICAL NECESSITY

HOD ACTION: Adopted recommendations contained in Board of Trustees Report 38 in lieu of Resolutions 112, 119, and 120.

RESOLVED, That the AMA continue working with the other organizations represented in the negotiated rule-making process to achieve consensus on improved, simplified, predictable, and consistent Medicare coverage and administrative policies for lab tests;

RESOLVED, That the AMA seek to repeal Section 4317 of the BBA granting the Secretary of HHS authority to require submission of diagnosis codes with every lab test claim, and all claims for services provided by an entity other than the ordering physician; and

RESOLVED, That the AMA develop a strategy to address remaining issues in the administration of Medicare's lab test benefit following the negotiated rule-making, including onerous requirements arising from the OIG model compliance plan for clinical laboratories, carrier education,

and dissemination of information about coverage policies to patients and physicians.

RESOLVED, That the Board of Trustees provide an update to the House of Delegates and the Federation on the negotiated rulemaking for lab tests and other regulatory and legislative developments in the administration of Medicare's lab test benefit at the 1999 Annual Meeting, or sooner if appropriate.

### RESOLUTION 307 - SUBSPECIALISTS FUNCTIONING AS PRIMARY CARE PHYSICIANS

HOD ACTION: Adopted Substitute Resolution 307

RESOLVED, That it is the policy of the American Medical Association that clinical privileges in primary care be granted to physicians that have demonstrated capability through education, training, experience and current competence; and be it further RESOLVED, That the practice of managed care organizations to arbitrarily deny primary care privileges to physicians because of subspecialty or second specialty training be opposed by the American Medical Association.

## OSMA Purchases Oklahoma Centralized Verification Organization

Effective January 1, 1999, ownership of the Oklahoma Centralized Verification Organization (OCVO) was transferred from the Tulsa County Medical Society (TCMS) to the Oklahoma State Medical Association (OSMA). The transfer occurred as OSMA purchased the limited liability company (LLC), formed to operate OCVO, from Tulsa County. The final agreement was reached after two years of discussion and negotiation between the organizations, and approval was granted at the December 29, 1998 meeting of the OSMA Board of Trustees. At this time, OCVO will remain in Tulsa, and Michelle Seba, current program manager of OCVO, will direct the transition.

OCVO began in 1988 as a member service of TCMS. As physicians completed their residency or relocated to the Tulsa area, they sought privileges at multiple hospitals. Physicians often completed the same information on different forms for different facilities, making the process repetitive and time-consuming. To streamline the process, the TCMS Board created an organization that collects information from physicians and completes necessary reference checks and verifications for client hospitals. This occurs under the direction of Oklahoma physicians, rather than an out-of-state or commercial entity. In this way, physicians can ensure the accuracy and confidentiality of the information submitted to OCVO as well as control distribution of the information.

In 1988, OCVO processed 50 applications; in 1998, the number of applications totaled more than 5,000. Each year more clinics and hospitals contract with OCVO, with a total of 63 clients accessing the service by December 1998.

In 1995, as Oklahoma's managed care industry continued to grow, OCVO began contracting with organizations that required physicians from outside Tulsa County to be credentialed. Presently, OCVO handles files of allied health professionals, as well as physicians, in order to provide the credentialing services required by its clients. In addition, OCVO has a centralized reappointment process, with a total of 43 clients.

The purchase of OCVO by OSMA brings more funding to the service, but also provides statewide access for physicians as well as name recognition and marketing benefits of being owned by OSMA. "OCVO provides quality credentialing collection for Oklahoma physicians," said Paul Patton, executive director of TCMS.

"Our primary goal for OCVO is to provide physician control of the information, rather than relying on for-profit organizations," said William Geffen, MD, immediate past president of TCMS. Physician control ensures the integrity of the organization, according to Michelle Seba. "Our main focus is on protecting physician confidentiality. Other for-profit groups may not be as protective of a physician's credentialing information," said Ms. Seba.

"With OCVO, physicians know they are dealing with someone associated with the state medical association." This focus on physician ownership and responsibility has resulted in a three-year certification of OCVO by the National Committee for Quality Assurance for 10 out of 10 verification services through October 2000. The National Committee for Quality Assurance is an independent, non-profit organization that certifies credentials verification organizations, and accredits managed care organizations.

The future of OCVO, according to Ms. Seba, is electronically-based. "Reducing paperwork and costs is one of our goals," said Ms. Seba. Electronic transfer of information will not only simplify the process in Oklahoma, but will also enable OCVO to provide credentialing services across state lines as technological advances, such as telemedicine, become more common. In addition, OCVO hopes to establish more client contacts across the state, and will consider offering consulting services to hospitals and managed care organizations. With the growth and development of OCVO afforded by this transfer of ownership, the purpose of the organization remains the same. "We are looking forward to new opportunities that OSMA will provide to OCVO, and want to assure physicians of the continued strict confidentiality of their credentialing information," said Ms. Seba.

## AMA Asks Justice Department to Challenge Aetna/Prudential Merger

The American Medical Association asked the Department of Justice to challenge the proposed merger of Aetna/Prudential, calling the merger anti-competitive and a threat to the freedom of patients and employers to choose their health care plans.

"The market power that would be created or exacerbated by this merger would limit the choices of patients and employers, reduce competition, and further erode the ability of physicians to make medical decisions based on science and the medical needs of their patients, not share price," AMA Executive Vice President E. Ratcliffe Anderson, Jr., MD, said in his letter

to Joel I. Klein, head of the department's Antitrust Division.

"We are convinced that 'bigger' in the health care market place does not always result in 'better' outcomes for patients. Choice is particularly critical in a rapidly changing industry such as health care. Only in a competitive market can patients make effective choices about the plans which will best serve the health needs of their families."

According to Anderson, the Aetna/Prudential merger would "create a dominant entity" and would allow the new company to "drive medical decisions based on

financial and stockholder expectations."

"Any increase in Aetna's market power would further diminish the ability of patients to receive the quality of care they seek from physicians dedicated solely to their best interests," Anderson wrote.

Anderson's letter is the latest effort in an ongoing AMA campaign aimed at correcting and exposing managed care abuses. For the past year, the AMA has attempted to convince Aetna to ease harmful practices that are not in the best interests of patient care and to adopt practices that will restore trust on the part of patients and physicians.

## Hall of Famers

On Nov. 18, 1998, two native Oklahoma physicians were inducted into the Hall of Fame. W. French Anderson, MD, a Tulsa native, is an internationally-recognized pioneer in gene therapy and currently serves as Director of the Gene Therapy Laboratories and Professor of Biochemistry and Pediatrics at the University of Southern California School of Medicine.

Donald L. Cooper, MD, is an internationally-honored pioneer in sports medicine. He joined the faculty at Oklahoma State University in 1960, where he served as physician for all OSU athletic teams, and until 1990, served as Director of Athletic Medicine. Dr. Cooper was the first Oklahoma medical doctor on the President's Council on Physical Fitness and Sports.

Edward N. Brandt, MD, PhD, and Louis Jolyon West, MD, served as presenters during the ceremony, which was held at the Performing Arts Center in Tulsa. The Hall of Fame event was broadcast on Saturday, Nov. 21, 1998, on the Oklahoma Educational Television Authority.

*below:*

*Donald L. Cooper, MD, (right) visits with Jimmie Baker at the Nov. 18 event.*



*above:*

*Edward N. Brandt, Jr., MD, PhD, (right) escorted award recipient W. French Anderson, MD.*

*Photos courtesy of the Oklahoma Heritage Association.*

## Oklahoma Physician Recognized by National Women's Magazine

Lori Hansen, MD, facial plastic surgeon in Oklahoma City, was recently recognized by *Vanity Fair* magazine as one of America's 200 most influential women for her work treating patients of domestic violence. Dr. Hansen and her husband, Wes Lane, spearhead Face to Face: National Domestic Violence Project, through which surgeons have treated hundreds of women bearing physical signs of domestic abuse. Face to Face is sponsored by the American Academy of Facial Plastic and Reconstructive Surgery and the National Coalition Against Domestic Violence.

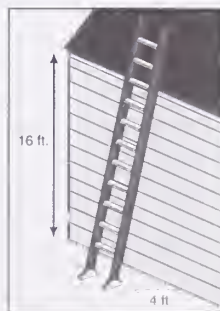


## OSMA Council on Public and Mental Health Endorses "Climb It Safe" Program

At its Dec. 16, 1998 meeting, the Council on Public and Mental Health wholeheartedly endorsed an American Academy of Orthopaedic Surgeons' public education program titled, "Climb It Safe."

This program promotes ladder safety through a brochure which discusses how to choose the correct type of ladder, how to inspect a ladder, how to move and set up a ladder and uses graphics to show the proper ways to use a ladder.

For more information about this program or to order a supply of brochures, contact the American Academy of Orthopaedic Surgeons, 800/626-6726.



## Oklahoma Physicians to Participate in End-of-Life Care Program

Eight Oklahoma physicians are among 270 physicians selected to participate in a new program being launched by the American Medical Association's Institute of Ethics aimed at helping physicians improve the end-of-life care they provide their patients.

The Education for Physicians on End-of-life Care or EPEC Project will educate physicians in essential clinical competencies in end-of-life care, including palliative care, ethical decision-making, symptom management, communication skills and psychosocial issues.

Oklahoma physicians participating in EPEC are: John Belzer, PhD, Oklahoma City; Marie Bernard, MD, Oklahoma City; Lawrence Cibula, MD, Muskogee; Kevin Donovan, MD, Tulsa; Timothy W. Holder, MD, Muskogee; Allene B. Jackson, MD, Oklahoma City; D. Robert McCaffree, MD, Oklahoma City; Michelle Ondersma, PhD, Oklahoma City.

"We're pleased to have Oklahoma physicians representing our state at such an important conference," said Brian Foy,

executive director of the Oklahoma State Medical Association. "We look forward to having them share with us the lessons they learn about end-of-life care."

The EPEC curriculum, which has been designed with input from nationally respected experts in the field, combines didactic sessions, videotape presentations, interactive discussions and practical exercises. Physicians participating in EPEC are expected to share the skills and knowledge they learn with their colleagues.

"EPEC is very much a train-the-trainer program," Linda Emanuel, MD, PhD, principal investigator for EPEC said. "For it to be successful, participants have to take what they learn and share it with others. We're encouraging institutions and physician groups in Oklahoma to contact these participants after they have completed the conference to see about setting up their own training sessions."

In all, approximately 450 health care professionals from around the world submitted applications to participate in EPEC. The first of four EPEC regional

conferences took place Jan. 15-17, 1999 in Phoenix. Others will follow in Atlanta, Feb. 19-21; Chicago, March 5-7; and Boston, March 12-14.

"We wish we could have taken every applicant—they were all that impressive," Dr. Emanuel said. "But these workshops are going to be 'hands-on' and highly interactive. For that to happen, we had to limit the physicians participating."

Follow-up programs to accommodate most, if not all, interested physicians are being planned, Dr. Emanuel said.

"We want to give every physician an opportunity to participate in this project," said Dr. Emanuel. "EPEC is very much an ongoing effort. These regional conferences are just a first step toward providing all physicians with the skills they need to give their patients competent and compassionate end-of-life care. The key now is getting these participants to go out and share this information."

For more information about the EPEC Project, visit the EPEC website at <http://www.ama-assn.org/ethic/epic/index.htm>.

## LETTER TO THE EDITOR

### More Vaccinations Needed

#### TO THE EDITOR:

I am writing in response to the recent article regarding influenza immunization rates for Oklahoma Medicare patients. In our community, we have found it very effective to have a multi-location approach to immunizing our Medicare population. In particular, we utilize the clinic, the hospital setting, the local senior citizen centers, as well as our home health agency. Without doubt, we could have a higher vaccination rate if we had

greater availability of the influenza vaccine. This year, our supplies were depleted in the second week of November, yet we still had a number of patients requesting the vaccine. I feel like any effort to increase immunization rates will need to address this issue of vaccination availability for rural communities.

**R. Phillip Berry  
Stattuck**

Letters to the Editor do not necessarily reflect the editorial policies or beliefs of the *Journal* or the Oklahoma State Medical Association. All submissions are subject to editing.

Address your letters to:  
Ray V. McIntyre, MD  
OSMA Journal Editor  
601 W. I-44 Service Rd.  
Oklahoma City, OK 73118

## Y2K (year 2000)

Timothy Walker, MD

### Is there a problem?

Okay, so you've heard about the Y2K problem and you say, "How can a date be such a problem?" Or you're saying, "So what? It's coming regardless of whether I do anything about it or not. I've already got more to be concerned about."

Then there are the predictions—all the way from the sky is falling to the whole thing is just an over-hyped employment opportunity for Cobol programmers. How do you know what to believe?

A bumper sticker that I would like to see: Why tu Kay?

Some of you may think you have a rough idea what the so-called millennium bug (or the 2000 bug) can do, but do you? Does anyone? Given that the probable truest answer is no, we will proceed.

You may have heard that the problem originated because in the "old days" of computing (which is, of course, the last thirty years), two-digit dates were commonly used in computer systems to conserve "memory" (which was at the time very expensive). The more likely explanation is that most people find it easier to write two digits for the year (i.e. 98 for 1998), and early programmers were no different.

But what does that mean and why is it a problem?

### The computer's perspective

To give you a rough explanation of what it is, we have to look into the "thinking process" of a computer. Don't worry, it won't be too deep a look — this is not a course in computer science.

The computer can only act on and respond to instructions given to it by humans. These instructions can be made to reside "hardwired" in the machine so that it does a dedicated process or by "software" commands supplied via RAM (random access memory) to the CPU (central processing unit) for action (software applications).

Frequently, in all programs (both those "hardwired" or those loaded in by "software"), the computer evaluates conditions which tell it whether it should keep doing what it is doing or stop doing what it is doing. This is accomplished with logic statements which must evaluate conditions to be true, or not false, to continue. The problem, in essence, is this: using only the two-digit year on a system might result, for example, in the year 1998 being represented as 98, and the year 2000 being represented as 00. Thus, any use of programs, systems, or embedded devices which use any date after 1-1-2000, or any that use the year 2000, might be interpreted by the machine as 1-1-1900, or 1900. Strangely enough, some of them would interpret this as the year 1980. This could result in incorrect results or failure in programs that perform arithmetic operations, comparisons, or sorting of date fields based on these values.

The year 2000 is vulnerable on many sides. One possible scenario is that a logic condition may be evaluated to be false, even though the condition is true by a miscalculation based on the machine's misconception that you are calculating with 1900 instead of 2000. If you are lucky, the system will stop working. The reason why this is lucky is that if the system stops, you will know that you have a problem. If you're not so lucky, the system will use what it thinks is the right date for calculation and render spurious results, which might not be immediately evident.

### Systems which should be checked (if possible) or verified through vendors

The following systems use embedded devices which could be affected. This list is not complete, but will be helpful:

Phones and phone systems; voice mail systems; PBX systems; pagers; Fax machines; printers; copiers; scanners; electronic typewriters or word processors; electronic registers; date/time stamping machines; vaults; network hardware; modems; elevators; environmental control systems (including sprinklers, programmable thermostats, or security access); VCRs; televisions; video cameras; teleconferencing equipment; automated alarm and fire alarm systems; process control and monitoring equipment; power utilities; maintenance systems; and stock control systems.



**Timothy Walker, MD**

## Potential impact

This is a hassle for those of us who use small computer systems; it is potentially very disruptive in the large systems. Consider, for example, the maritime shipping industry. Modern shipping relies heavily on date-dependent computing technology for navigation and coordination; it would be a logistic nightmare if computers were not used to coordinate these activities. Can you imagine how many goods come into this country every day? Oil, cars, computers and computer parts, running shoes...I could, obviously, go on.

Many computing devices that are used in larger enterprises, such as shipping, are what are called "embedded" devices or controllers.

In such systems, the instruction set is permanently "burned into the wiring." To change the code you have to remove the device. Some of these are difficult to access and difficult to check, short of major expense.

No major business enterprise is immune. Systems predictably of concern include telecommunications, transportation, some security devices (locks which are set by date on vaults) and, of course, banking, financial, and insurance endeavors.

No one can truly predict the scope of the problem, but many are trying to do so. The least knowledgeable are saying that it is all hype. The president of the Federal Reserve Bank of Chicago stated that the problem may cause the United States economy to slow only one-tenth of one percent for the next two years as a result of the bug. Some of the financial forecasters are suggesting that the problem will necessitate billions in spending for two or three more years at the least. Some lesser-credible sources have predicted total world collapse.

I suspect that the truth lies somewhere in between — I just don't know where, and neither does anyone else.

If you are working under the misconception that you can wait because the problem will only occur after the rollover occurs, you are mistaken. Applications that use expiration dates that go beyond the year 2000 are already at risk.

## Taking precautions

Okay, fine. But what does all this mean in terms of immediate and practical events which apply directly to you and over which you have control? If you use a personal computer in your home or office, all of your software licenses may expire and remain expired, even if you can reset your computer's clocks. To recover, you may need to contact each vendor separately for a new password/serial number; or, you may be forced to reinstall from scratch. Other passwords or privileges may expire. Files with specified retention dates may be deleted. This would, obviously, be very disruptive.

It is clear that you should do as much as you can now to avoid future expense. After 1999 it will probably cost you more. Technologists who are knowledgeable and capable of handling the fixes are and will continue to be in high demand. These people are not springing up like weeds and they are aware of what supply and demand mean in a market economy.

**In general, the most reliable sites for information on Y2K available on the world wide web will be government or university sites. Government site addresses will end in ".gov," while university sites will end in ".edu."**

Food and Drug Administration, with a direct link to the Center for Devices and Radiological Health: [www.fda.gov/cdrh](http://www.fda.gov/cdrh)

Health Care Financing Administration: [www.hcfa.gov/y2k](http://www.hcfa.gov/y2k)

President's Council on Year 2000 Conversion: [www.y2k.gov](http://www.y2k.gov)

General Services Administration: [www.itpolicy.gsa.gov/mks/yr2000/y2khome.htm](http://www.itpolicy.gsa.gov/mks/yr2000/y2khome.htm)

Information Technology Association of America: [www.itaa.org/year2000.htm](http://www.itaa.org/year2000.htm)

Hewlett Packard Year 2000 Tools: [www.hp.com/year2000/cure.html](http://www.hp.com/year2000/cure.html)

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## Y2K strategy

It would be very wise for you to implement your own Y2K strategy for your home and office.

A comprehensive evaluation of your systems could save you some real headaches. If you are not willing or able to do this yourself, you should divide the labor among your office staff, or hire professionals to do the task. Your strategy should include the following steps:

1. Evaluation — of all systems, programs and documentation of those which are affected.
2. Analysis — of the necessity of each in your personal or business model.
3. Decision — based on the above, as to which computer systems or embedded systems should be eliminated, replaced, outsourced or converted or repaired.

You should identify all computers in your enterprise and the dates they were acquired. Almost all PCs acquired through 1996 potentially have the problem. All Apple Macintosh hardware systems and all versions of the Mac operating system have been “year 2000 savvy” since day one. In fact, the Mac systems can handle dates properly between 3,081 BC and 29,949 AD. However, some programs made for the Mac (particularly those which have PC origins) may not be Y2K compliant.

If you are PC-based, you need to match your PC model number and Basic Input-Output System (BIOS) versions with the vendor-supplied Y2K compliance lists which are published on the internet. If you do not know what this means, you will need to hire a “techy” that does — but beware. You might save a significant amount of money by becoming more familiar with the technology and checking your own systems before you call in the cavalry.

In general terms, if you use a computer program with birth dates; run queries such as Easytrieve and QMF; contact vendors and send or receive data with dates to and from them via tape, e-mail and electronic data interchange; have any “home-grown” spreadsheets; macros with dates or databases with dates; or have standard packages such as Word, Lotus, or Excel, you may have problems.

The Center for Devices and Radiological Health (CDRH) is the component of the FDA which is responsible for the safety and effectiveness of medical devices in the United States. As a result, the CDRH is interested in assuring that the “Year 2000 date problem” does not adversely impact the health of patients or the delivery of healthcare related to the functioning of medical devices. CDRH maintains an excellent website in an effort to assist with this issue. They have a database, albeit incomplete, where manufacturers can report Y2K product status. In some medical practices this is an issue with the possibility of dire consequences and demands attention.

You need to contact all the vendors and ask them to provide sufficient evidence to demonstrate adequate testing of the product when the product in question is stated to be compliant.

## Practical suggestions

It is always a good idea to have paper copies of all your financial records and documents, especially those of any activity during the last half of 1999. Some suggest that you might keep more cash on hand than you usually do. Having more liquid reserves on hand in case insurance reimbursements are delayed might be a good idea, but you will have to examine your individual situation to see if this is feasible and/or necessary. Talking with your accountant or financial advisor specifically with reference to your own Y2K strategy is prudent and advisable.

There are several good resources which will provide useful information for dealing with this issue. Interestingly enough, digital technology which created the problem provides the best resource for information to solve the problem — the internet. A simple search, such as “Y2K and general information” (using the quotes), entered into Yahoo or other internet search tools will yield many valuable resources which might be of great assistance. There are commercial (Norton) and shareware applications which can examine your systems and tell you if you have the problem on your computers — if you are familiar with using these. The FDA’s site with the direct path to the CDRH is <http://www.fda.gov/cdrh>.

The final answer to the question, “What will be the ultimate result of the Y2K bug?” remains to be seen. The wisest strategy at this juncture is to be aware and prepare.

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Timothy Walker, MD, co-chair of the OSMA communications council, is a graduate of the University of Oklahoma College of Medicine, class of '71. He has had a long-standing interest in digital technology and has studied C programming and Foxpro programming.

He is in private practice in plastic surgery in Oklahoma City and has developed a totally paperless medical office system. He is a member of the American Medical Informatics Association. Forward any comments to [T1Walker@earthlink.net](mailto:T1Walker@earthlink.net) or [T1Walker@aol.com](mailto:T1Walker@aol.com).

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## From the Oklahoma State Department of Health

### CDC Recommendations for Diagnosis and Initial Management of Hepatitis C Virus Infection

Prepared by Mike Crutcher, MD, MPH, State Epidemiologist, and Kay Holt, RN, Hepatitis B and C Program Coordinator, with the Oklahoma State Department of Health.

Hepatitis C is a growing public health concern in the United States. All physicians should be aware of who should be tested for HCV, based upon risk factors for infection, as well as how to manage persons found to have positive screening tests. The following recommendations focus primarily on the role of the primary care physician in the initial evaluation and management of persons who test positive for HCV and are excerpted from the Centers for Disease Control document "Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-Related Chronic Disease," Oct. 16, 1998 / 47(RR19);1-39.

### Overview of Hepatitis C

Hepatitis C virus (HCV) infection is the most common chronic blood-borne infection in the United States. During the 1980s, it is estimated that an average of 230,000 new infections occurred each year (CDC, unpublished data). Although the annual number of new infections declined to approximately 36,000 by 1996,<sup>1,2</sup> serological surveys have indicated that an estimated 3.9 million (1.8%) Americans have been infected with HCV3. Most of these persons are chronically infected and might not be aware of their infection because they are not clinically ill. Infected persons serve as a source of transmission to others and are at risk for chronic liver disease or other HCV-related chronic diseases during the first two or more decades following initial infection.

Population-based studies indicate that 40 percent of chronic liver disease is HCV-related, resulting in an estimated 8,000-10,000 deaths each year (CDC, unpublished data). HCV-associated end-stage liver disease is the most frequent indication for liver transplantation among adults.

HCV is transmitted primarily through large or repeated direct percutaneous exposures to blood. Blood transfusion, which accounted for a substantial proportion of HCV infections acquired greater than 10 years ago, rarely accounts for recently acquired infections, although the risk is not zero. In contrast, injecting-drug use consistently has accounted for a substantial proportion of HCV infections and currently accounts for 60 percent of HCV transmission in the United States. Sexual transmission can occur but appears to be rare; the risk is increased with multiple sexual partners or a history of STDs. Other risk factors include organ or tissue transplants prior to donor testing, long-term kidney dialysis, and employment in patient care or clinical laboratory work.

### Testing for HCV Infection

Diagnostic tests for HCV include serological assays that detect antibodies to HCV (anti-HCV), and tests that detect HCV nucleic acid (HCV RNA). Anti-HCV tests include the Enzyme Immunoassay (EIA) and the Recombinant Immunoblot Assay (RIBA). EIA is the initial test of choice for diagnosing or screening for HCV. (see Fig.1 on next page)

The EIA is very sensitive but not highly specific, and false positives may occur, especially in persons at low risk for HCV infection (e.g., blood donors). Persons with a positive EIA should undergo confirmatory testing with RIBA, which is more specific than EIA. If this test is negative and the person has no evidence of liver disease, the EIA was almost certainly a false positive and the person can be reassured.

A positive EIA and RIBA indicates that the patient has had an infection with HCV, but does not tell us whether the infection is ongoing or resolved (however, only about 15 percent of cases are self-limited).

Although ALT levels are abnormal in the majority of persons with chronic HCV infection, about one-third of these patients have normal levels.

The presence of active infection can be determined by the HCV RNA assay, which detects the HCV virus directly. However, the HCV RNA test is limited by potential laboratory technical problems and the fact that at times HCV RNA is only detectable intermittently, even in cases of active infection.

(cont. on next page)

## Testing for HCV Infection (cont.)

Little is known about the proper management of persons with positive EIA and RIBA assays who are negative on HCV RNA testing. These individuals may require monitoring and repeat RNA testing.

Evaluation of persons with indeterminate RIBA test results might include

repeating the anti-HCV tests in two or more months or testing for HCV RNA and ALT level. HCV RNA might be appropriate to confirm the diagnosis of HCV infection in some persons (e.g., in EIA positive patients with abnormal ALT levels or with indeterminate RIBA results). However, because of the reasons

mentioned above, if the HCV RNA result is negative, RIBA or repeat HCV RNA testing would be indicated to determine the patient's infection status.

### Persons for Whom Routine HCV Testing is Recommended

1. Persons who ever injected illegal drugs, including those who injected once or a few times many years ago and do not consider themselves as drug users.
2. Persons with selected medical conditions, including: (a) persons who received clotting factor concentrates produced before 1987; (b) persons who were on chronic hemodialysis; and (c) persons with persistently abnormal alanine aminotransferase levels.
3. Prior recipients of transfusions or organ transplants, including: (a) persons who were notified that they received blood from a donor who later tested positive for HCV infection; (b) persons who received a transfusion of blood or blood components before July 1992, and (c) persons who received an organ transplant before July 1992.
4. Healthcare, emergency medical and public safety workers after needle sticks, sharps, or mucosal exposures to HCV-infected blood.
5. Children born to HCV-positive mothers.

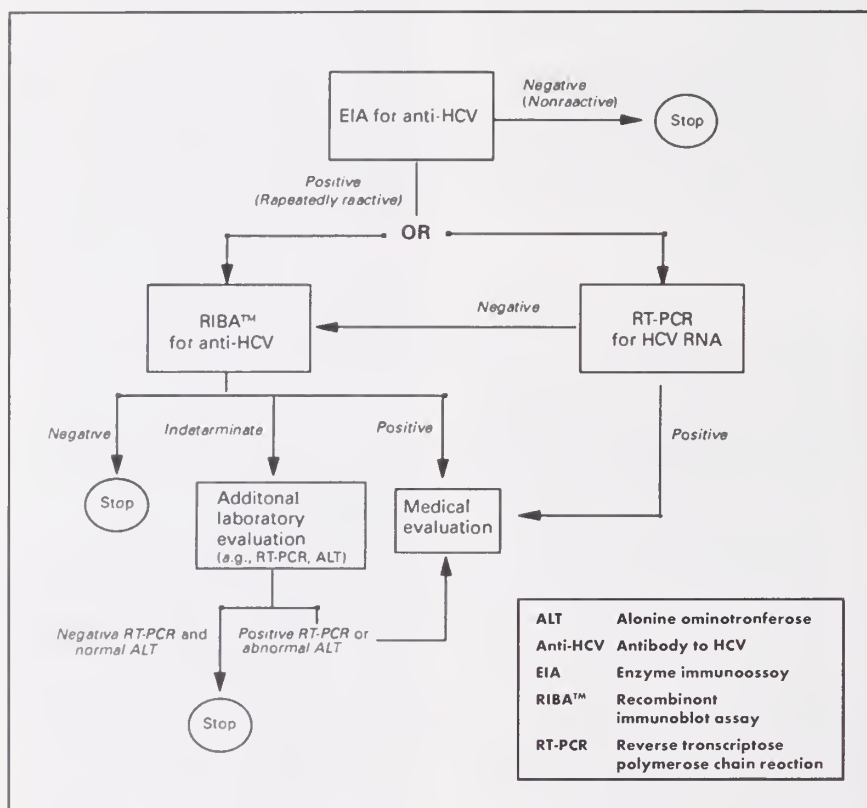


Figure 1. Hepatitis C virus (HCV)-infection-testing algorithm for asymptomatic persons.

## Management of Hepatitis C

The NIH "Consensus Statement on Management of Hepatitis C" was based on data available in March 1997.<sup>4</sup> Combination therapy with interferon and ribavirin is now FDA-approved for treatment of chronic hepatitis C in patients who have relapsed following interferon treatment and might be approved soon for patients who have not been treated previously. Because of advances in the field of antiviral therapy for chronic hepatitis C, standards of practice might change, and readers should consult with specialists knowledgeable in this area.

## Persons Recommended for Treatment

Treatment is recommended for patients with chronic hepatitis C who are at greatest risk for progression to cirrhosis, as characterized by

- persistently elevated ALT levels;
- detectable HCV RNA; and
- a liver biopsy indicating either portal or bridging fibrosis or at least moderate degrees of inflammation and necrosis.

## Persons for Whom Treatment Is Unclear

- patients with compensated cirrhosis (without jaundice, ascites, variceal hemorrhage, or encephalopathy);
- patients with persistent ALT elevations, but with less severe histologic changes (i.e., no fibrosis and minimal necroinflammatory changes) (In these patients, progression to cirrhosis is likely to be slow, if at all; therefore, observation and serial measurements of ALT and liver biopsy every 3-5 years is an acceptable alternative to treatment with interferon); and
- patients aged less than 18 years or greater than 60 years (note that interferon is not approved for patients aged less than 18 years).

## Persons for Whom Treatment Is Not Recommended

- patients with persistently normal ALT values;
- patients with advanced cirrhosis who might be at risk for decompensation with therapy;
- patients who are currently drinking excessive amounts of alcohol or who are injecting illegal drugs (treatment should be delayed until these behaviors have been discontinued for greater than or equal to 6 months); and
- persons with major depressive illness, cytopenias, hyperthyroidism, renal transplantation, evidence of autoimmune disease, or who are pregnant.

## Prevention Messages and Medical Evaluation

Asymptomatic persons who initially screen positive on EIA testing but are negative with confirmation testing can be reassured. Persons whose HCV test results are indeterminate should be advised that the result is inconclusive, and they should receive appropriate follow-up testing or referral for further testing (see above, "Testing for HCV Infection").

Persons with active HCV infection should be provided with information regarding the need for preventing further harm to their liver, reducing risks for transmitting HCV to others, and medical evaluation for chronic liver disease and possible treatment.

To protect their liver from further harm, HCV-positive persons should be advised to: (1) not drink alcohol; (2) not start any new medicines, including over-the-counter and herbal medicines, without checking with their doctor; and (3) get vaccinated against hepatitis A if liver disease is found to be present.

To reduce the risk for transmission to others, HCV-positive persons should be advised to: (1) not donate blood, body organs, other tissue, or semen; (2) not share toothbrushes, dental appliances, razors, or other personal-care articles that might have blood on them; and (3) cover cuts and sores on the skin to keep from spreading infectious blood or secretions.

HCV-positive persons with one long-term steady sex partner do not need to change their sexual practices. They should: (1) discuss the risk, which is low but not absent, with their partner (If they want to lower the limited chance of spreading HCV to their partner, they might decide to use barrier precautions {e.g., latex condoms}); and (2) discuss with their partner the need for counseling and testing.

HCV-positive women do not need to avoid pregnancy or breastfeeding. Potential, expectant, and new parents should be advised that: (1) approximately 5 out of every 100 infants born to HCV-infected women become infected (This occurs at the time of birth, and no treatment exists that can prevent this from happening); (2) infants infected with HCV at the time of birth seem to do very well in the first years of life (More studies are needed to determine if these infants will be affected by the infection as they grow older).

Other counseling messages include: (1) HCV is not spread by sneezing, hugging, coughing, food or water, sharing eating utensils or drinking glasses, or casual contact; (2) Persons should not be excluded from work, school, play, child-care or other settings on the basis of their HCV infection status, and; (3) Involvement with a support group might help patients cope with hepatitis C.

HCV-positive persons should be evaluated (by referral or consultation, if appropriate) for presence or development of chronic liver disease including: (1) assessment for biochemical evidence of chronic liver disease; (2) assessment for severity of disease and possible treatment according to current practice guidelines in consultation with, or by referral to, a specialist knowledgeable in this area (see excerpts from NIH Consensus Statement in the following section); and (3) determination of need for hepatitis A vaccination.

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## DEATHS

### **J. Robert Walker, MD 1907-1998**

J. Robert Walker, MD, died November 18, 1998. He was born in Fort Madison, Iowa, on November 17, 1907. Dr. Walker attended the University of Oklahoma School of Medicine, receiving his medical degree in 1943. During his career, Dr. Walker was a member of the clinical faculty of the University of Oklahoma, and staff member of St. Anthony, Mercy, and Presbyterian hospitals in Oklahoma City. Dr. Walker was a member of the National Association of Anesthesiologists, the Oklahoma Academy of Medicine, the American Medical Association, and past president and member of the Oklahoma Society of Anesthesiologists. He was also a member of the Oklahoma State Medical Association, of which he was a life member since 1976.

### **Melvin Ross Arthurs, MD 1928-1998**

Melvin Ross Arthurs, MD, died December 24, 1998. He was born on August 8, 1928, in Binger. Dr. Arthurs attended the University of Oklahoma School of Medicine, where he received his medical degree in 1954. A member of the Oklahoma State Medical Association, Dr. Arthurs received life membership status in 1989.

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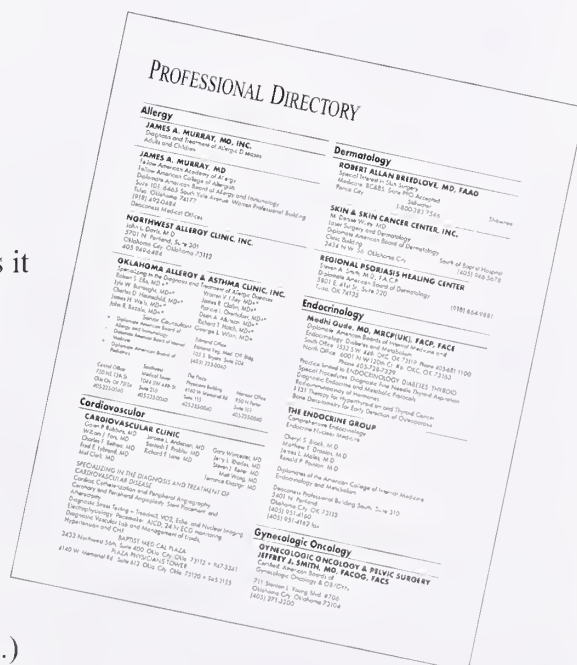
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by Judy Critchfield  
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As a new legislative year begins, there are many important issues that will be coming up in this legislative session. OMPAC needs your support. If we all participate, then we can all benefit from a strong and influential presence at the Capitol.

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Both you and your spouse should belong to OMPAC. It is not too much to ask to make an investment in your family's future. Both physicians and spouses have received mailings with this information, as well as contributor statements. Please take time to fill out this statement and send in your contribution so OMPAC can be an even bigger influence this year.

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# THE LAST WORD

## **House of Delegates Reinforces Position on E&M Adopted in June**

During the Interim Meeting of the AMA House of Delegates held in December, members of the AMA reinforced their opposition of E&M guidelines, including numeric methods of evaluating documentation. The resolution passed during the meeting states, "Resolved, that our AMA express outrage that the practice of medicine is characterized as abusive and fraudulent, and vigorously oppose the harassment of honest physicians." Delegates from the Oklahoma State Medical Association were among the attendees of the Interim Meeting in Hawaii.

## **Local Medical Group Participates in "Race for the Cure"**

During the "Race for the Cure" held at the Myriad Gardens in Oklahoma City, 280 patients, family members, friends, employees, and physicians of Cancer Care Associates participated in the race, reportedly the state's largest all-women 5K. More than 60 breast cancer patients responded to invitations to participate in the race, free of charge.

## **"Not Medically Necessary" No Longer in HCFA Vocabulary**

The phrase "not medically necessary" will no longer be used by the Health Care Financing Administration to explain why Medicare beneficiaries were denied coverage of a claim. The announcement was made at the AMA Interim Meeting held in December 1998. Physicians became angry with both the federal government and private insurers, both of whom used the phrase inaccurately to describe a service not covered by the insurance plan. (*American Medical News*, Jan. 4, 1999)

## **Number of Human Organ Transplant Operations Reaches 1,000**

The 1,000th human organ transplant operation was recently performed at Oklahoma's Transplantation Institute (OTI). OTI is also noted for its record of survivability, for which it is ranked among the top transplant centers in the nation. Members of the OTI medical staff include Oklahoma State Medical Association members Nazih Zuhdi, MD, John Chaffin, MD, and Scott Samara, MD.

## **Weedn Attends 4,000th Delivery**

Alan Weedn, MD, recently attended his 4,000th delivery. Dr. Weedn is an obstetrician/gynecologist in Chickasha, where he has practiced medicine since 1979. The child, a boy, was delivered December 4, 1998. Included in those 4,000 deliveries was the birth of the first set of in-vitro twins delivered in Oklahoma.

## **Oklahoma Physician Honored by Nicaraguan Government**

Warren Pagel, MD, a Tulsa anesthesiologist, was honored by the central government of Nicaragua for his efforts to modernize the anesthesia residency program at a local hospital. During his first visit in 1996, Dr. Pagel found outdated equipment and techniques were being used in the major trauma center in Managua, Nicaragua. Since that time, Dr. Pagel has collected and delivered medical supplies, including textbooks, in an effort to update the facility's anesthesiology department. More than \$753,000 in medical aid and educational materials have been delivered by Dr. Pagel.

## **Ethics of Stem Cell Research Debated**

Recent congressional hearings on federal funding of stem cell research has provided no easy answers. Government funding of stem cell research could provide benefits in as little as five to 12 years for diseases such as Parkinson's, but current federal law does not permit funding of research based on the use of human embryos—generally the source of stem cells. (*American Medical News*, December 21, 1998)

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## Call for Photos

For those who enjoy photography, the *Journal* encourages the submission color photographs of Oklahoma scenes or native wildlife for consideration as cover photos.

## Call for News

In addition, the *Journal* welcomes general news items featuring medical trends which have an effect on the practice of medicine in Oklahoma. Announcements of an Oklahoma physician's role in a national organization or project are also invited.

## Submit Materials

Your submission of these types of materials will be much appreciated. The *Journal* team will be eager to be helpful in the processing of submissions. Address your envelope to:

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## The Rewards

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Geese and ducks take to the water at  
Shanoan Springs Park in Chickasha.  
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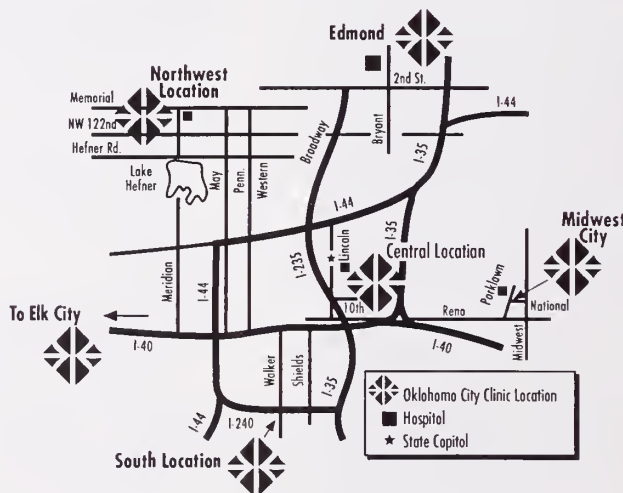
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## On Time Savers

"The most valuable resource in a doctor's office is the physician's time. Having others gather routine information before you are called in can free your time for asking key medical questions and performing physical examination."<sup>1</sup>

This quotation is a typical example of a time-management precept that is restated quite often in various forms. The validity of the precept when applied to **routine** personal data tends to increase the temptation of practice managers to also elicit medical or psychosocial data that have much different implications.

With many commonplace and straightforward clinical situations, the expertise of the historian probably matters very little. Some highly specialized referral practices may successfully delegate some aspects of the medical history to specially trained ancillary personnel. But in most clinical practices, the inappropriate medical historian and the incorrect psychosocial assessment are a major cause of miscommunication and patient dissatisfaction with the medical contact. Patients do not believe that insurance clerks or nurses can transfer their medical history intact to the physician, and some patients have medical histories they will share **only** with a sensitive physician.

Complicating these medical history hiatuses is the primordial problem of the difference in agendas that clash when patient meets physician in the clinical setting. The patient may come for relief of a bellyache, but also wants to know if cancer is present, and if he should take out more insurance.

The physician may well wish to assuage bellyaches, but other motivations are invariably of more interest to the physician, and some of these may widen the communications gap between patient and physician. For example, the physician may interpret the bellyache as an indication for an endoscopic procedure that the patient views as an uncomfortable, and costly, delay of his agenda.

Cultural and generational differences in communication strategies further confuse the time/efficiency processes in many clinical interactions. Nussbaum reports that intergenerational medical encounters suffer "**more often than not**" from suboptimal communication.<sup>2</sup>

The causes of these suboptimal contracts are naturally highly variable and dependent on the characteristics of the involved dyad. In practice, probably the majority of the fiascos result from the physician feeling pressed for time while the patient is pushing an agenda of little interest to the physician. Typically, physicians will spend a lot of time in the search for an indication for an operation or a procedure while the patient is frantically searching for an adaptive regimen that avoids a costly invasion.

These agenda differences may be characterized by the patient reporting, "The doctor didn't listen to me." On the other hand, the physician may label the patient "excessive talker" or speak of "off-target verbosity." In the absence of an ambulatory dementia, many "excessive talkers" are promoting a personal agenda that they cannot verbalize well. The wise physician helps the patient translate fears and concerns into a mutually understood schedule of tasks.

A knowledge of the natural history of disease is the key to a complete medical history. In most practices, the person on site with the most medical knowledge will obtain the best history. In the end, the greatest medical time saver is an accurate diagnosis.

*Ray V. McIntyre, M.D.*

Ray V. McIntyre, MD  
Editor-in-Chief

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"the greatest  
medical time  
saver is an  
accurate  
diagnosis"

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An editorial is a column of personal opinion that may or may not reflect the official position of the OSMA.

1. *Medical Practice Communicator* 1998; 5(4):4.  
2. Nussbaum JF. Physician-older patient communications during the transition from independence to dependence. *J Okla State Med Assoc.* 1998; 91:504-508

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# PRESIDENT'S PAGE

## Oklahomans in Good Hands

Remember familiar lines from a known song... "March roared in like a lion?" The activities of your members and the OSMA are like that characterization of the spring. Thanks to you the health of Oklahomans is in good hands, and our focus of work to improve the health status of its citizens is identified.



Medicine Day at the Capitol was a success thanks to you and our Alliance. There were hundreds of Doctors in the "House" and Senate, and our concerns were heard. Continued involvement of physicians with their legislators is necessary to bring about the changes needed to improve the health of Oklahomans.

The third annual report, the State of the State's Health, will be released on March 3, 1999, at the State Capitol. There is good news, a decrease in injuries related to automobile accidents related to the increased use of seat belts. Congratulations to our citizens and the Highway Patrol. Please encourage your patients to buckle up! Now, the other news. Oklahoma continues to have a higher mortality rate for stroke, hypertension, lung and breast cancer and higher rates for smoking and alcohol use than other states. These specific diseases are the focus of the Campaign for Health Task Force recently appointed by the Board of Trustees. Several medical communities have already begun to focus on health issues, for example, Tulsa, Texas and Cherokee counties with their Turning point projects, coordinated through the county health departments. A stroke risk detection project occurred in Garfield County and was an overwhelming success. The Stroke Prevention Project will be initiated this summer and fall to address this important issue statewide. The Schools for Healthy Life Styles in Oklahoma County continues to bring information

about good health habits to young students. Data about youth risk behavior is available through the behavior survey conducted by the Oklahoma State Health Department. This data, based on over 6600 high school students, contains information about tobacco and alcohol use and other activities considered at risk for 9th through 12th grade students. There is an incremental increase in cigarette use from the 9th grade (24.4 %) to the 12th grade (33%). Alcohol use is higher, with 29.9% of 9th graders and 44.4 % of 12th grade students reporting heavy drinking. Teens ask for adult help in this survey, requesting education about these areas as early as the 4th and 5th grades. Physicians are considered a resource for schools, and your help is needed.

An educational program on Tobacco and Lung Cancer for Women and Girls has been developed by the American College of Chest Physicians. Together with the Alliance, the OSMA is sponsoring a pilot project to bring information about the use of tobacco and its effect on poor health, to the classroom. This informative slide series contains data appropriate for a variety of audiences, including young students, teachers, physicians and community leaders. The Chest Foundation is supporting this project. Contact the OSMA for details.

The report of the Sooner Care Task Force has been received, highlighting the issues facing Emergency Department physicians, hospitals and insurance companies. They report an increase in use of the ER, and decrease in reimbursement and the requirement of the Emergency Medical Treatment and Labor Act, requiring all hospitals to screen patients that come to the ER. It is recommended that a "case rate" be established for all emergency department visits, that health plans follow five new guidelines, and that the Task Force, or a similar diverse group, monitor the changes recommended. This report is being considered by the legislature.

The new guidelines are:

1. Health plans may not require provider or facility to contact the physician to obtain authorization as a condition of payment for treatment rendered to a patient that does not result in admission.
2. Hospital shall provide health plan notification of the patient's emergency department visit no later than midnight of the next business day. The plan may not deny case rate payment without a pattern of physician noncompliance with notification.
3. Health plans may not request medical records as a condition of reimbursement, only for auditing or quality assurance purposes.
4. Health plans will accept electronic claims no later than 7-1-2000 based on the current software format as the current state Medicaid program.
5. Health plans must negotiate separately and in good faith with each hospital and emergency department physician groups when approached by them.

The Oklahoma State and Education Employees Group Insurance Board (OSEEGIB) recently announced a decrease in payments to many physicians as recommended by a consulting firm from Maryland. Your OSMA leadership has met with the OSEEGIB to discuss members concerns. Physicians whose reimbursement is below the cost of services to their patient will have such payments adjusted. However, documentation of such variances is necessary to obtain the adjustment. Your OSMA is obtaining the fee schedule and will continue to meet with OSEEGIB.

Just like March, roaring like a lion, with spring winds, rain and weeds, your OSMA continues to work on strengthening the health of our citizens, despite trials and tribulations. All can be accomplished with your involvement. Thanks.

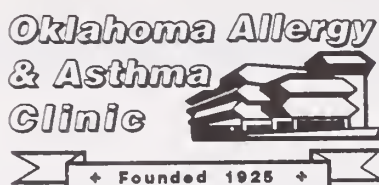
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Mary Anne McCaffree  
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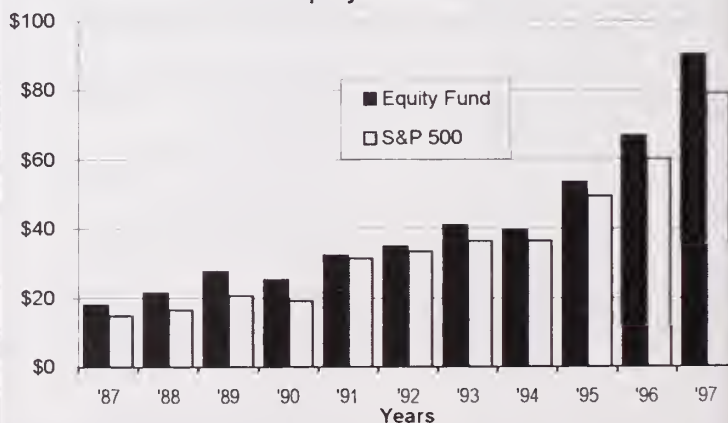
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## Videotapes in Evaluating Work-Related Upper Extremity Symptoms

Jonathan L. Sollender, MD; Ghazi M. Rayan, MD

Thirteen patients with upper extremity symptoms that were claimed to have occurred in the course of employment were evaluated to determine the role of videotapes in their evaluation and management. Videotapes were of two types: work demonstration by patient or co-worker (8 tapes) and surveillance tapes obtained by a private investigator (5 tapes). Four of eight work station videotapes demonstrated significant repetitive motion that could have contributed to their symptoms. Four of eight work station videotapes demonstrated that the tasks were neither forceful nor repetitive in nature. Return to work recommendations were made based on both clinical grounds and job site information provided on tape.

After viewing five surveillance videotapes, two fraudulent claims were settled soon after medical opinions were rendered. Two patients were declared able to return to work; one returned to work and the other was dismissed. The videotape of patient No. 13 was not crucial for the decision and he was authorized to have surgery. The opinions formed concerning the causality of alleged claims of injury were often altered by viewing the content of the videotapes. Videotapes are a valuable tool and useful adjunct in the overall management of the workers with upper extremity symptoms.

Understanding the mechanism of injury is an integral part of evaluating patients in the workplace. An inquiry by the treating physician includes identifying the occupation, type of equipment used, applied forces, work pace, method of using the upper extremity, hand position and frequently used joints. This information is provided by the patient and allows the physician to create a mental image of the work environment and the method by which the symptoms

have occurred. Creating a true mental image could be impaired by lack of familiarity by the treating physician of the work-related tools and terminology. The purpose of this report was to explore the significance of using videotapes of the work place in the overall management regarding work related upper extremity symptoms.

### Materials & Methods

Videotapes were used in the management of 19 patients with work-related upper extremity symptoms. These patients came from different job sites. Thirteen patients were the subject of this report. These patients were chosen because their videotapes were available at the time the study was conducted. The included videotapes were of patients during surveillance, at work or of a coworker performing the same job using the same machines. Six patients' videotapes could not be included in the study, five videotapes were retrieved by the employer shortly after patients' evaluation or their discharge, and one patient's videotape was instructional produced by the company. The average age of the patients was 36.0 years (range 23 to 53 years). The patients consisted of eight women and five men. There were 10 right-handed patients, two left-handed and one who was ambidextrous. Twenty one diagnoses were made and confirmed with objective physical findings at the initial office visits, with an average of 1.9 diagnoses per patient. Seven patients had dominant upper extremities involved, three patients had non-dominant upper extremities involved and three patients had both upper extremities involved. The average length of employment prior to the reported date of injury was 6.5 years (range 6 months to 23 years). Three patients had previous surgeries in the form of dorsal wrist ganglion excision (#5), carpal tunnel release (#11) and flexor tendon repair (#13).

Direct correspondence to: Ghazi M. Rayan, MD, 3366 NW Expressway, Suite 700, Oklahoma City, Okla. 73112.

## Videotapes in Evaluating Work Related Upper Extremity Symptoms

Table 1. Patient Data

| Patient # | Occupation                                      | Alleged Injury                       | Symptoms  | Diagnosis  |
|-----------|---|--------------------------------------|---|--|
| 1         | Phata sorter                                    | Repetitive                           | R. hand, forearm & elbow pain, weakness & paraesthesias | R. medial epicandylitis, R. cubital tunnel syndrone                |
| 2         | Sandblaster of metal tanks                      | R. wrist contusion                   | Vague R. hand pain & parasthesias                       | Possible R. dynamic carpal tunnel syndrone                         |
| 3         | Assembly line, making air conditioner parts     | Repetitive                           | R. elbow pain   | R. lateral epicondylitis, R. radial tunnel syndrone                |
| 4         | Assembly line, feeding and labeling metal posts | Repetitive                           | R. hand paraesthesias, L. elbow pain                    | R. dynamic carpal tunnel syndrone, L. medial epicondylitis         |
| 5         | Airline mechanic                                | L. wrist trauma and previous surgery | L. wrist & hand pain and weakness                       | Past-surgical scarring following wrist gangliectomy                |
| 6         | Painter with high pressure air gun              | Trauma dorsal L. wrist & repetitive  | L. hand pain and paraesthesias                          | Mild L. carpal tunnel and pronator tunnel syndrone                 |
| 7         | Metal molding maker                             | Repetitive, forceful                 | R. thumb pain, R. hand paraesthesias                    | R. TMC arthritis, R. dynamic carpal tunnel syndrone                |
| 8         | Uniform cleaner                                 | Repetitive                           | B. hand numbness, B. wrist & forearm pain               | B. flexor tenosynovitis, B. carpal tunnel syndrone                 |
| 9         | Electric switch tester                          | Repetitive                           | L. forearm pain and paraesthesias                       | L. forearm flexor tendinitis                                       |
| 10        | Denim jean press operator                       | Repetitive                           | L. wrist pain   | L. flexor carpi radialis, tendonitis, L. deQuervains tenosynovitis |
| 11        | Machinist                                       | L. hand, wrist trauma                | L. hand pain and paraesthesias                          | L. carpal tunnel syndrone, carpometacarpal bassing                 |
| 12        | Telephone operator                              | Repetitive                           | B. shoulder and hand pain & paraesthesias               | B. thoracic outlet syndrone  |
| 13        | Assembly line                                   | Crushing                             | Inability to flex index finger                          | Flexor digitorum profundus laceration                              |

B=bilateral; R=right; L=left; TMC=trapeziometacarpal joint; NSAID=Non-Steroidal Anti-Inflammatory Drug

The videotapes were provided by the employer, insurance company, workers' compensation court, rehabilitation nurse, and on two occasions they were requested by the treating physician. The clinician was asked to view the videotapes in order to offer a non-biased opinion regarding 1) the mechanism of injury, 2) causal relationship between work tasks and alleged injury, 3) management plan, 4) veracity of a claimed injury, and 5) possibility of insurance fraud. After viewing the videotapes, the following factors were assessed: 1) whether the viewed individual is the patient in question or another supposedly asymptomatic employee, 2) the location of the footage, whether taken at the place of employment or off the premises as by a surveil-

lance camera, 3) whether a patient was aware of being recorded while performing the activity that is claimed to cause the injury, 4) the method in which the affected upper extremity is being used, and searching for clues that may explain the mechanism of injury. The force requirements involved in various jobs were estimated by video observations and by incorporating information from the patient, rehabilitation nurse, and reviewing written job task requirements. Objective measurements of these forces were not obtained.

Office charts including the occupational history of all patients were reviewed and the information was used to determine the role the videotapes played in the management of these patients. After

**Table 1. Patient Data (continued)**

| <b>Treatment</b>                          | <b>Opinion Before Viewing</b>                           | <b>Opinion After Viewing</b>                    | <b>Recommendations</b>                            | <b>Outcome</b>  |
|---|---|---|---|---|
| Immobilization, NSAID                     | Repetitious work causing symptoms                       | Not repetitious work, symptoms not work related | Return to work without restriction                | Alternate job offered, later patient dismissed              |
| Splint, NSAID, injection                  | Work perpetuating symptoms                              | Work not aggravating symptoms, fraudulent claim | Unrestricted use of hand                          | Did not return to work. Case settled                        |
| Immobilization, NSAID, injection, surgery | Repetitious work causing symptoms                       | Repetitious work causing symptoms               | Should not return to same work                    | Retired after brief return to work                          |
| Immobilization, injection, surgery        | Repetitious work causing symptoms                       | Repetitious work causing symptoms               | Should not return to same work                    | Returned to same work without restriction                   |
| Strengthening exercises                   | Cannot work because of wrist weakness & pain            | Fraudulent claim                                | Return to work without restriction                | Resigned after brief return to work                         |
| Immobilization, NSAID, injection          | Repetitious work causing symptoms, aggravated by trauma | Work perpetuating symptoms                      | Change job description                            | Returned to work for 1 year. Dismissed for unrelated causes |
| NSAID, surgery                            | Repetitious work causing symptoms                       | Forceful, repetitious work causing symptoms     | Avoid repetitious tasks after surgical recovery   | On long-term disability leading to retirement               |
| Injection, splints surgery                | Forceful & highly repetitious work                      | Not forceful, mildly repetitious                | Return to work without restriction                | Not working. Case still open                                |
| Strengthening exercises, splint, NSAID    | Work related injury, needs alternate job                | Not highly repetitious                          | Return to work without restriction                | Returned to work without restriction. Case closed           |
| NSAID, splint                             | Repetitious work causing symptoms                       | Repetitious work causing symptoms               | Modify work habits                                | Resolved symptoms   |
| NSAID, splint, surgery                    | Cannot work because of pain                             | Working a second job without symptoms           | Return to work without restriction                | Benefits ceased, quit job                                   |
| Therapy, modifying work station           | Any use of arms causing symptoms                        | Proved patient can do more than claimed         | Return to part-time work and later full-time duty | Returned to work without restrictions                       |
| Repaired, but developed adhesions         | Should not have surgery                                 | Can use the hand in modified work               | Tenolysis surgery is authorized                   | Hand surgery by patient's surgeon                           |

reviewing the office charts, the information gathered from both charts and tapes were compared to determine if viewing the videotapes had changed our opinion concerning the veracity of a claimed work-related condition. Lastly, we postulated whether lacking the availability of videotapes would have allowed the clinician to come to similar conclusions and opinions about the patient's diagnosis and treatment.

## Results

The majority of diagnoses were compression neuropathies (Table 1). Patients' diagnoses of compression neuropathy were not confirmed routinely by electrodiagnostic studies. These studies were used twice and the remaining patients' diag-

noses were made clinically. The diagnosis of tendonopathy, often referred to as "tendinitis," was based on clinical evaluation. Five patients gave history of acute trauma on the job that precipitated symptoms, in addition to forceful or repetitive use of the upper extremity. Patient #2 twisted his right hand while holding a sandblasting hose and striking his forearm against a metal rod. Patient #5 was stretching material overhead on an airplane door when he felt a wrist "pop" with weakness and paraesthesias. This patient had several previous injuries to his wrist and stiffness related to post-operative scarring. He had a dorsal wrist ganglion excision three years previously (performed at another hospital) and was also very active in racing cars, both as a mechanic and dri-

ver of dragsters. Patient #6 sustained an injury when a 15-pound statue fell on her forearm. Patient #11 had blunt trauma and patient #13 had a crushing injury with flexor tendon laceration. Eight patients did not have acute trauma, but gave history of repetitive and forceful motions at work (Table 1). Four patients had surgery because they failed to respond to non-operative treatment.

The videotapes were two types: work station demonstration (eight videotapes) and surveillance (five videotapes). The work station demonstration videotapes were done with knowledge of the patient being studied. The average length was 28 minutes. All but two had audio; none were narrated. All surveillance videotapes were produced by professional private investigators without the patient's awareness. All but one had dates and times displayed; none had audio. The average length of the surveillance tapes was 1:12 minutes. Seven videotapes showed the patients themselves either in surveillance or performing various tasks, while the remaining six videotapes showed other employees demonstrating tasks which were performed similarly to those reported to be done by patients in this study. Eight of the 13 videotapes showed the tasks the employee performs that allegedly caused the symptoms. Of these eight videotapes, four demonstrated highly repetitive motion and what appeared to be forceful work that is believed to have contributed to these patients' symptoms or aggravated a pre-existing condition. These videotapes confirmed that the work conditions are compatible to history given by these patients.

Based on the images of the remaining work station videotapes, it was concluded that the tasks required of these employees could not have contributed to a claimed repetitive motion injury. These jobs were not forceful, highly repetitious or involving abnormal pressure. One such patient (#1) originally described her work tasks as highly repetitious sorting and inspecting photographs on a computer monitor. The videotape confirmed contradictory evidence from the history provided by the patient. As viewed on the tape, her tasks were determined to be slow, leisurely paced, with minimal manipulation of photos. This task was deemed not to cause or aggravate the patient's condition of cubital tunnel syndrome and medial epicondylitis.

The five surveillance videotapes showed patients who were not aware of being taped. These videotapes showed the patients using their affected upper extremities in a variety of hobbies, sports, and activities of daily living. Four patients

were using their extremities in what seemed to be unencumbered strenuous physical activity. Patient #2 was seen lifting heavy cabinets and hammering with the affected hand. Patient #5 was seen on videotape performing mechanical work on a car, connecting a heavy trailer to a truck, manipulating and carrying a heavy water cooler with his affected hand, and driving a dragster approximately 150 miles per hour. One patient (#12) claimed that she is unable to work because of severe symptoms provoked by using a keyboard. She was viewed stacking chairs, scrubbing, vacuuming, and pulling on a sail boat to be anchored at a dock. After viewing the videotape she was deemed able to return to work. She returned to a restricted, and subsequently to full, duty. One patient (#13) was viewed playing tennis using the contralateral hand. He was denied tendon surgery by the insurance company alleging that he does not need surgery because he can play tennis and is able to engage in vigorous activity. After viewing the tape, tendon surgery was authorized because distal interphalangeal joint active flexion was necessary for the patient's work. This decision, however, could have been made without viewing the tape. Based on these surveillance tapes, new opinions were reached concerning the management and functional impairment in four of five patients.

As a result of viewing the 13 videotapes, new and different opinions were formed regarding causality and management of most patients that were not possible without the videotapes. These opinions would not have been formulated without the vivid images seen on the tapes.

### Discussion

The pathogenesis of "cumulative trauma disorders" is a subject of controversy and debate. In spite of numerous publications in the literature on upper extremity symptoms in the work place, none have established a causal relationship between distinct medical entities and work activities.<sup>1</sup> In spite of this, the treating physician is often confronted with the question of whether a certain task has contributed to the worker's symptoms. More often than not it is difficult for the physician to ascertain a causal relationship.

One important facet in the evaluation and management of upper extremity symptoms in the work place is conceptualizing the ergonomics involved in these conditions. Without a detailed occupational history, it is difficult for the clinician to understand the mechanism that a worker claims has caused his injury.<sup>2</sup> Even with a careful history, there are times when lingo used by the

patient to describe work tools and skills is confusing and consequently creates an inaccurate image in the mind of the evaluating physician. Hand surgeons therefore must rely on their own experience and imagination to envision the work station that the patients describe.

There are several methods of evaluating patients in the work place after they have developed work-related symptoms, most of which involve assessing a patient's ability to return to work. These include tests used by therapists to emulate job related tasks, such as functional capacity evaluation, Purdue Pegboard test, BTE Simulator, Minnesota Rate of Manipulation, and Validity Profile testing.<sup>3</sup> These tests provide the clinician with information to assess the effect of treatment and ability to perform comparable tasks at the work place. There is, however, paucity of information in the literature that may assist the clinician in determining symptoms causality based on occupational history. Some of the arbitrary means are reviewing a list of the patient's job description, viewing photographs of the work station, or written/verbal reports from the patient's supervisor or rehabilitation nurse. The most objective method of evaluating the patient and work station is a job site visit, which the hand therapist is accustomed to doing, but often is unfeasible for the treating physician. It would be helpful for physicians to visit every patient's work site to understand the characteristics of the job.<sup>4</sup> This method has its shortcomings and is time consuming and often impractical. Additionally, some patients with an outstanding claim against their employer have a bias that influences the accuracy in conveying information to the clinician during the history taking.<sup>5</sup>

Within the past several years, portable, compact videocassette recorders have found many unforeseen uses. We found this method to be invaluable in the evaluation of upper extremity work-related symptoms. Despite the cliché that a picture is worth a thousand words, it rings true that the use of videotapes is most compelling in conveying needed information that a patient cannot provide to the clinician. Videotapes bring the job site visit to the clinician, with the motion, sight, and sound readily present. For some patients, the work station demonstration videotapes confirmed the nature of the tasks described by patients' history; in others, they contradicted the patients' history of repetitious tasks. They were used to favorably affect the patients' management by modifying their work habits.

Of particular benefit were the five surveillance tapes that involved patients with a variety

of diagnoses. Viewing two of these videotapes confirmed that these patients' claims of having disabling upper extremity conditions were fraudulent. The videotapes that demonstrated work stations were also helpful in patient management. Two patients were returned to work with restriction including one (#13) who was denied surgery by the insurance company. After we viewed his tape, the insurance carrier's decision was reversed and tendon surgery was authorized.

We found work station demonstration and surveillance videotapes to be most useful in formulating opinions and treatment strategies. When requesting work station videotapes, the surgeon must ask for the patient, rather than another employee, to demonstrate the work cycle. This is necessary in order to delineate any abnormal patterns of upper extremity use by that particular patient. Such information can be used in management and prevention. Careful video analysis should be done to determine if there is anything specific about motion and pattern (whether repetitive or not), which would result in the application of harmful levels of tissue stress. Identifying a pattern of repetitive motion on the video, however, does not validate a relationship between work and claimed injury. Individual worker's tolerance to tissue stress, systemic predisposing factors, and recreational activities can all play a role in the development of symptoms. Familiarity with the epidemiology of the work place can also be helpful in that regards.

We believe videotapes are a useful adjunct in the overall management of patients in the work place. They can provide additional information that can be utilized by the clinician to gain a clear understanding of the work environment and ergonomics involved in work-related symptoms. (J)

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## Leptospirosis

Kristy K. Bradley, DVM, MPH

Leptospirosis—given many nicknames, including “marsh fever” and “mud fever”—is not a zoonosis one expects to contend with during one of the worst droughts in state history. However, this disease presented itself under some unusual circumstances this past summer.

In July, the Centers for Disease Control and Prevention (CDC) led an outbreak investigation of a cluster of febrile illness occurring among participants of a triathlon competition in Illinois and Wisconsin. These were very large qualifying events and participants came from 44 states. Two triathletes were identified as Oklahoma residents. As of September 1998, 30 of the outbreak-associated cases had been confirmed as leptospirosis with 60 more classified as suspect cases. Although the epidemiologic research is ongoing, exposure to contaminated water in a very large recreational lake, where the swimming portion of the triathlon was held, appears to be the source of the *Leptospira* infections.<sup>1</sup>

Closer to home, local media coverage during the weekend of August 23 focused on a mysterious illness afflicting three members of the same family from Tillman county in southwestern Oklahoma. A few days prior to onset of illness, the father and son had gone frogging at a nearby pond and the family had later had a frogleg barbecue. The predominant symptoms were fever, intense myalgia, burning or itching of the fingers and toes, and hemoptysis followed by numerous subcutaneous hemorrhages. Two additional family members became ill with milder, but similar symptoms five days later. Leptospirosis was prematurely reported as the cause of the puzzling maladies by the television media, although the cause of their sickness has still not been elucidated. Exposure to three family dogs and a private water well, as well as the frogging pond, were

explored as potential sources of infection for leptospirosis.

These recent events should serve to raise our level of awareness about this widespread zoonosis. Leptospirosis is a notifiable disease in Oklahoma requiring all cases to be reported to the Oklahoma State Department of Health. Between 1980 and 1997, an average of 0.5 cases per year (range 0-4) have been documented. The general clinical description for leptospirosis is an illness characterized by fever, headache, chills, myalgia, conjunctival suffusion, and less frequently by meningitis, rash, jaundice, or renal insufficiency. Biphasic symptoms may be observed. According to the surveillance criteria established by CDC and the Council of State and Territorial Epidemiologists (CSTE), laboratory confirmation of a case is satisfied by one of three methods: (1) Isolation of *Leptospira* from a clinical specimen, (2) fourfold or greater rise in antibody titer between paired sera obtained at least two weeks apart, or (3) demonstration of *Leptospira* by immunofluorescence.<sup>2</sup>

Current taxonomy places all serovars known to cause disease in animals or humans under one species—*Leptospira interrogans*. More than 200 pathogenic serovars of *Leptospira* have been identified. All serovars can infect all mammals; however, pathogenicity and clinical manifestations depend on the animal host and infecting serovar. Necessary to the maintenance of the disease in a geographical area is the survival of serovar-specific leptospires in reservoir hosts, which can be domestic mammals or wildlife. Birds, reptiles, and amphibians are not involved in the epidemiology of leptospirosis. If a leptospire infects a reservoir animal of the same species (host-adapted), it causes endemic disease. If a different species is infected (incidental, non-

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**Table 1. Common *Leptospira* Serovars and Their Primary Animal Reservoir in the U.S.**

| Serovar            | Primary Animal Reservoir        |
|--------------------|---------------------------------|
| Pamana             | Cattle, swine, skunks, apassums |
| Hardja             | Cattle                          |
| Grippotyphosa      | Raccoons                        |
| Conicala           | Dogs                            |
| Icterohemorrhagiae | Rats                            |
| Bratislava         | Swine                           |
| Ballum             | Mice                            |

host-adapted), sporadic outbreak of disease generally results. These outbreaks are often associated with an increased density of carrier rodents and contamination of the environment. The bacteria are inactivated by drying, but can persist in the environment under moist conditions in mud, urine and bodies of water. A high prevalence of seropositive animals has been correlated with high mean ambient temperatures.<sup>3</sup>

Important differences exist between infections in reservoir hosts and infections in incidental hosts. Typically, reservoir host infections result in relatively mild clinical signs, produce low antibody titers, have high prevalence in a population, and cause prolonged (months to years) urinary shedding. In contrast, incidental host infections have a low incidence and often manifest with severe clinical signs. Urinary shedding is of short duration and high antibody titers are produced in response to infection. Human beings are incidental hosts of leptospirosis and the clinical syndromes can be very varied making this a diagnostic challenge for physicians. Human-to-human transmission of leptospirosis is considered very rare.

The recommended treatment for moderate or severe cases is IV penicillin G or IV ampicillin for five to seven days. Oral doxycycline (100 mg bid), ampicillin (500-750 mg qid), or amoxicillin (500 mg qid) for a minimum of seven days can be used for mild cases.<sup>4</sup>

### Key points about leptospirosis:

- Leptospire bacteria are very infectious. The spirochete bacteria are able to penetrate intact mucous membranes or abraded skin. Only a small inoculum is needed to result in an infection, and the urine of an acutely infected animal may contain as many as  $10^5$  organisms/ml of urine.
- The typical incubation period is seven to 12 days with a range of two to 20 days.

- Approved vaccines are available for cattle, dogs, and swine, but vaccination may not protect against a carrier state.
- Cross protection among serovars does not develop after vaccination or naturally-acquired infection.
- To detect infection with a particular serovar by serological testing, that serovar must be included in the antigen battery because cross-reactivity with other serovars may not occur.
- Leptospirosis is probably being underdiagnosed. Canine leptospirosis caused by serovar grippotyphosa appears to be increasing in the United States, particularly in the Northeast. Infected dogs often present with acute renal failure. Worldwide, most human cases of leptospirosis are attributed to rodents, but in the U.S., most human infections result from direct or indirect contact with infected dogs or livestock. □

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## A Practical Approach to Managing Community Dwellers with Alzheimer's Disease

Peter A. S. Winn, MD

This article will review multiple strategies and treatment options that can be utilized by clinicians to address the ever-changing and varied needs of community dwelling elders with Alzheimer's disease and those of their families. Comprehensive assessment and the judicious use of medications, together with other non-pharmacological interventions, may lessen the burden of care on families and decrease the likelihood of institutionalization.

### Recognition and Diagnosis of Alzheimer's Disease

Alzheimer's disease (AD) is a chronic and progressive neurodegenerative disorder that profoundly decreases the "health span" of those it afflicts. Individuals with AD gradually lose the ability to remember, to care for themselves and

others, and to communicate with loved ones, family members, and friends. Eventually they will become incontinent, immobile, and bedridden. Death may then be perceived as an escape from the bonds of indignity and is welcomed by the loved ones left behind.

The diagnosis of AD has been reviewed in another article.<sup>1</sup> This article assumes that the clinician reader has already performed an evaluation and determined that the patient most likely has "probable" senile dementia of the Alzheimer's type (SDAT). (See Table 1.)

Although the diagnostic approach to establishing the presence of AD can be viewed as one of "exclusion," many clinicians now consider AD to be a diagnosis of "inclusion." This concept is based upon several facts. First, in community dwellers, AD can account for up to 85 percent of dementia of moderate severity.<sup>2</sup> Second, if the course of a dementing illness progresses similarly to that of AD, is accompanied by risk factors associated with AD and the absence of risk factors associated with other causes of dementia, then the clinician can deduce that the dementing illness is most likely caused by AD. However, before proceeding, it is important that the clinician be aware of several key concepts.

First, the person with "not-yet-diagnosed" AD can present to a physician's office with a combination of progressive impairments in cognition, behavior, ability to perform activities of daily living, and/or other geriatric syndromes. (See Table 2.) Commonly it is a spouse or other family member that will report to the physician their concerns and other subtle perceptions that "things are just different."

Second, remember that memory is only one domain of normal cognition. (See Table 3.) The

**Table 1. Algorithm Establishing the Diagnosis of Probable Alzheimer's Disease**

**Step:**

1. establish the presence or not of memory loss
2. establish the presence or not of deficits in other cognitive domains
3. rule out other medical illness(es) as potential cause(s)
4. rule out other neuropsychiatric disorder(s) as potential cause(s)
5. establish diagnosis of a dementio syndrome
6. consider most likely causes of dementio
7. by exclusion/inclusion diagnose AD
8. consider potential co-existence of:
  - other dementios
  - delirium
  - depression
  - drug effects
  - other medical illness (either new onset or deterioration of)

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presence of isolated memory loss in a patient must not lead the clinician to assume that this patient is suffering from dementia. Such memory loss may be attributable to other causes such as age-associated memory impairment or age-related cognitive decline.<sup>3</sup> However, if impairment exists in three or more areas of cognition, then it is highly suggestive that a person may be suffering from a dementing illness. Also, one of the diagnostic criteria for AD is that these impairments must both be progressive and represent a decline from an individual's previous level of functioning (social and/or occupational).<sup>3</sup>

Third, remember that an individual who is cognitively impaired may in fact not be demented (Table 4). The presence of cognitive impairment (i.e., deficits in three or more areas of cognition) will itself generate a differential diagnosis. Indeed one or more of these conditions may co-exist with AD.

Finally, remember that other types of dementia can either co-exist with AD when AD is first diagnosed, or occur later during the course of AD (Table 5). Some of these conditions may be "potentially reversible" or "potentially treatable." Treatment of these co-morbid conditions may decrease the rate of functional decline or even improve function, at least in the short term.

### Treatment of Alzheimer's Disease

While the longitudinal clinical manifestations of AD are fairly predictable, the variability seen can often be attributable to intrapersonal, interpersonal, and social factors that are particular to an individual patient.<sup>4</sup> This article proposes a paradigm shift in treating AD to one that is both patient and family centered and promotes a rehabilitative approach to implementing clinical interventions that will focus upon impairments and disabilities that are secondary to the primary neurodegenerative disease process.

Gerontologic studies have proposed family systems theory as a model that can provide an explanation to the impact of AD on the family, as well as a framework for intervention.<sup>5</sup> As caregiving extends throughout the disease course it will burden families with a series of problems related to the progressive functional loss that occurs in the AD victim (Table 6<sup>5,6</sup>).

Thus it is proposed that a caregiver-centered approach by the clinician may potentially produce the most positive impact on maximizing quality of life for the AD patient and their caregivers.

It then follows that interventions can be instituted that address and alleviate (at least temporarily), those secondary symptoms of AD such as

**Table 2. Possible Presenting Signs and Symptoms of an Underlying Dementia**

#### Cognitive Impairment

- Loss of memory
- Disorientation to time, place, person
- Confusion
- Communication deficits (receptive and expressive dysphasia)
- Dyscalculia
- Impaired executive function (planning, organizational skills)

#### Behavioral Disturbance

- Anxiety-depressive disorders
- Psychosis (delusions, hallucinations)
- Sleep disturbances
- Aggressiveness (verbal and physical)
- Wandering/pacing

#### Decreased Ability in Activities of Daily Living (ADLs)

- Basic ADLs (ambulation, dressing, toileting, bathing, feeding, continence)
- Instrumental ADLs (household chores, finances, driving, errands, telephone use, taking medications)

#### Other Geriatric Syndromes

- Gait disorders and falls
- Incontinence of bowel and bladder
- Weight loss and feeding problems

#### Worsening Co-morbid Medical Conditions

**Table 3. Domains of Normal Cognition (Brain Function)**

- Alertness
- Attentiveness (concentration)
- Orientation
- Memory
- Language (comprehension, repetition, naming)
- Visuospatial skills
- Calculation
- Judgment

Note: Deficits in three or more domains "suggests" possible dementia

**Table 4. Potentially Coexisting Causes of Cognitive Impairment in AD**

- Age-associated memory impairment
- Age-related cognitive decline
- Neuropsychologically impaired (diminished IQ)
- Psychiatric disorders (e.g. depression, schizophrenia)
- Alcoholic dependency/abuse
- Other drug dependency/abuses
- Delirium (acute confusional state)
- Coexistent dementias

**Table 5. Potentially Coexistent Dementias with AD**

Stroke-related dementia  
Subdural hematoma  
Hypothyroidism  
B-12 Deficiency  
Parkinson's disease and related dementia  
Normal pressure hydrocephalus  
Neurosyphilis  
Brain tumors  
Dementia of depression

**Table 6. Burden/Losses Perceived by Caregivers of AD**

Memory loss/confusion  
Impact of diagnosis  
No longer able to take trips or go to social events  
Wandering, sleep disturbance  
Requires 24 hour supervision  
Incontinence of bowel/bladder  
Bedridden  
Weight loss  
Death

Source: adapted from written text of references 5 and 6

**Table 7. Areas of Potential Interventions**

Medical  
Health promotion and disease prevention  
Sensory (hearing, eyesight)  
Pharmacologic  
Psychiatric/behavioral  
Social  
Legal  
Financial  
Rehabilitative  
Nutritional  
Spiritual  
Environmental  
Palliative  
End-of-life (hospice) care

wandering, sleep disturbances, and incontinence. Anticipation of other potential problems such as depression, weight loss, increased likelihood of delirium, and the development of decubitus ulcers when bedridden, can guide the clinician in determining appropriate preventive interventions.

The clinician can perform a vital role as an advocate to the Alzheimer patient and their family. Interactive discussion over several office visits should encourage "advance thinking" and "advance planning," separate from the completion of an Advance Directive for Health Care. The multidimensional scope of possible interven-

tions are listed in Table 7. The relative importance of each intervention will vary during the course of the patient's AD.

Several interventions need to be considered, and possibly implemented, as soon as the clinician suspects the diagnosis of AD or a related dementia. The potential financial impact of the disease on the patient, family, and community needs to be determined and planning begun. This should include the assessment of assets and financial arrangements, as well as the determination of eligibility for such programs as social security disability, Medicaid, Medigap insurance, and long-term care insurance.

The clinician must perform a careful evaluation of the patient's mental status and cognitive ability in an effort to determine their capacity to participate in decision making (personal, clinical, financial). The clinician's opinion will aid family members (and attorneys) in deciding whether the individual still has the capacity to complete a durable power of attorney (DPOA) for person, assets, and health care decision making. If the AD individual is too confused to understand or to agree to a DPOA, then the only recourse is for the family or other representative to petition for guardianship through the courts, a much more legally cumbersome and costly procedure.

It must be emphasized that during the early stages of AD, an individual's ability to participate in decision making must be respected and encouraged. Clarification of personal values and preferences, as well as cultural, ethnic, and spiritual beliefs can help elucidate their health care preferences for the short and long term. These discussions should be appropriately and thoroughly documented in the medical record. Today's clinician must be knowledgeable about Oklahoma's Advance Directive for Health Care, the DNR Act, as well as end-of-life care preferences i.e., eligibility criteria for hospice. Early and thorough discussions that encourage planning and decision making by families, can go a long way to preventing monumental family disruption and conflict that can occur as AD progresses and mentally incapacitates the patient.

A clinician must not assume that no treatment option(s) exist for alleviating or preventing secondary impairments such as falls, urinary incontinence, agitated behavior, depression, dysphagia, and weight loss. Though these signs and symptoms may be a consequence of the natural progression of AD and related dementias, other potentially treatable causes should be sought. For example, new-onset and more frequent falls may be caused by emerging Parkinson's disease or

postural hypotension; urinary incontinence due to UTI or fecal impaction, BPH, or stress incontinence; anxiety or disruptive behavior due to depression; dysphagia due to occurrence of a stroke; or weight loss due to diabetes, depression, cancer, hyperthyroidism, or even medications.

As these problems occur, the clinician must decide, aided by frank discussion with family members, and the patient, if possible, whether a workup is appropriate or not. A workup may not be warranted if the patient is in the terminal stages of AD, if the workup would not change the management or course of the disease, if the patient refuses, or if it's known that they would have refused treatment. If the burden of the workup is greater than the benefit of the treatment (when the benefit will often be determined by the perceptions of family members), then the workup should not be initiated. Also, any potential benefits of interventions must be carefully balanced against the same intervention potentially contributing to a deterioration in cognition, behavior, or selfcare.

**Pharmacologic Management**

Pharmacologic interventions in Alzheimer's disease can be classified under four categories (Table 8): 1. those that treat the primary cognitive symptoms, 2. those that treat the secondary behavioral symptoms of the disease, 3. those that alleviate the noncognitive signs and symptoms that may accompany AD, and 4. those that treat comorbid disease(s).

Several excellent review articles and journal supplements have recently been published,<sup>7-9</sup> and the clinician reader is referred to these for in depth discussions on the pharmacologic management of AD and its behavioral sequelae. The key to managing any behavior, be it disruptive or not, is to understand the antecedents to the behavior, as well as its consequences. In AD, a behavior often indicates unmet needs that may not be understood because of the inability of the AD person to effectively communicate their needs.

Pharmacologic interventions can result in both dramatic improvements in patient functionality and a decrease in caregiver burden (emotional, medical, psychologic, and even financial). Falls due to postural hypotension may become less frequent with prescribing a mineral corticoid. Stress urinary incontinence may respond to anticholinergics, while weight loss may be reversed with treatment of depression. One must always prescribe "low and go slow." If a clinician assumes that any medication can potentially cause any side effect in the elderly, then adverse medication effects can be prevented or at least

**Table 8. Potential Pharmacologic Interventions for AD**

- 1. Treatment of cognitive symptoms**
  - Cholinergic Drugs (donepezil)
  - Anti-inflammatory agents (NSAIDs, steroids)
  - Anti-oxidants (vitamin E, seligiline, ginkgo biloba)
  - Estrogen
  - Anti-amyloidogenic therapy
- 2. Treatment of Behavioral Symptoms**
  - Anxiolytics
  - Antidepressants
  - Antipsychotics (typicals, atypicals)
  - Hypnotics
  - Anticonvulsants
- 3. Treatment of Other Non-Cognitive Signs and Symptoms**
  - Urinary incontinence
  - Falls/unsteady gait
  - Parkinsonism
  - Other movement disorders (e.g. myoclonus)
  - Postural hypotension
  - Seizures
  - Weight loss/anorexia
  - Skin pressure ulcers
- 4. Treatment of Comorbid Medical Diseases (if present, examples only)**
  - Hypertension
  - Coronary Artery Disease
  - Diabetes Mellitus
  - Hypothyroidism
  - Parkinson's disease
  - Other

**Table 9. Common Signs and Symptoms Seen in the Elderly Potentially Due to an Adverse Drug Reaction**

- Restlessness/somnolence
- Confusion/memory loss
- Unsteady gait/falls
- Depression
- Incontinence
- Constipation
- Weight loss
- Fatigue
- Movement abnormalities

**Table 10: Possible Goals Related to Alzheimer's Disease Care**

- 1. Maintain one's dignity
- 2. Optimize one's decision making capacity
- 3. Promote participation in decision making
- 4. Maximize independence in ADLs (and prevent premature decline)
- 5. Support family caregivers
- 6. Decrease polypharmacy
- 7. Delay likelihood of institutionalization
- 8. Provide palliative care

anticipated. Table 9 reviews those nonspecific signs and symptoms that may indicate an adverse drug effect in the elderly.

### Non-pharmacologic Management

The use of non-pharmacologic interventions in response to treating the changing and varied needs of AD has already been discussed to some degree earlier in this article (Table 7). An interdisciplinary team of health care providers and others can be pivotal in the provision of services needed by the primary care practitioner, the patient and the patient's family. A recent study has shown that supporting and training the caregiver can delay institutional placement.<sup>10</sup>

### Meeting the Challenge

The traditional problem-oriented model of medical care can quickly become overwhelming to the clinician who is caring for a person with AD. Perhaps a better conceptual model of care is one that is goal-oriented or goal-directed.<sup>11,12</sup> Combined with the principles of geriatric care, this conceptualization is more conducive to interdisciplinary teamwork and allows for increased involvement of patients and families in decision making.

In the goal-directed model of health care, the clinician's assessment requires not only the identification of individual impairments, but also evaluation of values, wishes and hopes, preferences, strengths, resources, and beliefs. This model inherently attempts to anticipate and prepare for future "challenges," previously termed "problems" in the problem-oriented model of care. Others have stated that the challenge of health care today is to realistically meet the needs for services in our American society that is democratic, pluralistic, multiethnic, multiracial, culturally diverse, and religiously variegated.<sup>13</sup>

AD patients and their family members, and/or other decision-makers, should be encouraged to look at the big picture and then within the constraints of prioritized goals, decide upon implementing only those care strategies that are most appropriate. Table 10 lists some potential goals. It is the responsibility of the clinician to be involved in the goal setting process through active listening, patient and family education, advocacy, encouragement, recommendations, and negotiation.<sup>11,12</sup>

### Summary: Past, Present, and Future

In the past, the majority of families were told by clinicians that nothing could be done for Alzheimer's disease. In fact, memory loss and dementia were often considered part of normal aging.

In the present, families are reporting to physicians subtle changes in memory loss, disorientation, personality, driving skills, or executive functioning that could be harbingers of early dementia. Clinicians need to be attentive to these concerns. Earlier diagnosis is paramount to initiating early treatment interventions that can potentially ameliorate the physical, psychologic, emotional, and financial impact of the dementing illness. Various treatments are now available that can directly improve the primary cognitive impairments of AD, while others address the secondary signs and symptoms that occur as a consequence of the primary neurodegenerative disease process. A holistic approach, applying a goal-directed paradigm of health care, may best respond to the needs of caregivers and result in an improved quality of life for the care receiver and the caregiver.

In the future, Alzheimer's disease will become recognized as a syndrome in which multiple causes and risk factors are operative. Present day research on the pathogenesis of AD already supports this hypothesis.<sup>14</sup> Future research will result in the development of multiple treatments that can slow if not arrest the neurodegenerative process of AD.

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## Juvenile Delinquency in American Indian Youths: Historical and Cultural Factors

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This paper addresses health aspects of juvenile delinquency in American Indian youths. Comorbid conditions such as substance abuse and depression often complicate diagnosis and treatment. A survey of the literature and an examination of cultural, family, and school issues that influence the presentation and management of conduct problems in Native American youths are included. Cases are presented to emphasize the importance of cultural sensitivity in clinical assessment and intervention.

### Introduction

Risk behaviors among our youths have important health consequences warranting assessment by physicians. For example, violent behavior commonly results in injury, disability and death. Substance use has potential consequences related to the environments and behaviors associated with procurement, to the physical effects of the substances themselves and to the behaviors triggered by the altered states induced. Sexual behavior poses risk for acute, chronic and fatal diseases. Teen suicide and suicide attempts are commonly the result of impulsive actions. Despite concern about these problems and a sense that they are especially prevalent in minority youths, there is a dearth of research on deviant and risk behaviors in Native American adolescents. Substance use<sup>1-5</sup> and suicidal behavior<sup>4,6-8</sup> in Native Americans have been well documented, but far less is known about delinquency in these populations. In a study of more than 13,000 American Indian and Alaska Native youths in eight Indian Health Service areas, Blum and colleagues found significant positive

correlations between poor physical health and social risk factors.<sup>4</sup>

Recognizing the importance of culture on physical and emotional health, attitudes, and behaviors, health care now commonly stresses cultural sensitivity in clinical assessment and intervention. Culture-sensitive approaches may be especially important with respect to delinquent behaviors as they are tied to attitudes. The large Indian population in Oklahoma makes this issue particularly important for clinicians in the state. This paper surveys the literature on delinquency in Indian youths, addresses common comorbid conditions such as substance use, depression, suicidality, and school problems, and presents case material to elucidate cultural issues and influences.

### Defining the Population

Legal definitions of "Indian" emphasize several criteria of tribal membership ranging from Indian blood quantum to acknowledgement as Indian by a tribe or Native community.<sup>9,10</sup> Such definitions, as well as common usage, focus on many factors common to diverse Indian populations, and much of the available research applies the term Indian or Native American generically without identifying tribal affiliation. Such practice blurs differences among tribes and continues to foster stereotyped thinking. Furthermore, while many Indians reside on reservations, many live in urban and rural areas throughout the nation. Data about Indians living off reservation are apt to be captured in general population data if at all, and specific attributes of those living on reservations are assumed to characterize those living in other settings. In Oklahoma,

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where the traditional concept of defined, isolated reservation boundaries is not applicable, clinicians may be unaware of an individual's status as an Indian or tribal affiliation.<sup>11</sup>

### Case Examples

Two youths hospitalized on an inpatient psychiatry unit of a major teaching hospital elucidate several important issues related to Indian delinquency

#### Case 1

John was an 11-year-old whose problems began at the age of six when his father, who did not live with the family, broke into the home and beat John's mother in the child's presence. Thereafter, John had intermittent violent episodes. At the age of nine, he was hospitalized after hitting his mother with a baseball bat. He was subsequently placed in foster homes, but returned to live with his mother several months before the current hospitalization, which was precipitated by episodes of violent behavior. On one occasion, John chased his mother and sister with a butcher knife and razor blade and threatened to kill himself with the instruments. Several weeks later, his mother was provoked into hitting John when he called her a "bitch." Enraged, John retaliated by hitting her back. The police were summoned and brought John to the hospital as an alternative to jail.

John did well during a lengthy hospital stay, which resulted as much from lack of a better placement as from need of prolonged inpatient treatment. Forced to examine his various losses, and with increased skill in verbalizing his feelings, John's anger gradually turned to sadness. On one occasion, he astutely pointed out that his father and uncles were all in jail and he assumed that was what he was "supposed to do" when he grew up. John had several episodes of unexpected violence while hospitalized, and on two occasions he tackled nursing staff to the floor. Careful analysis of these incidents revealed that they occurred when John felt he had been unfairly treated. Upon discharge, John was placed in the home of relatives.

#### Case 2

Beverly was a 13-year-old who was brought to the hospital by tribal police who had been searching for her for several weeks. Beverly had lived with relatives and in other place-

ments because her alcoholic mother was unable to care for her. Beverly had a long history of family disruption, truancy from school, runaway behavior and alcohol abuse, as well as a suicide attempt. During her hospitalization, the treatment staff became acutely aware of the problems of practicing cross-cultural psychiatry. Beverly had poor eye contact and was angry, agitated, withdrawn and suspicious. While her behavior was not grossly psychotic, her suspiciousness bordered on paranoia. Fortunately one of the resident physicians who was familiar with her culture was able to work with her and the staff to dispel the notion that Beverly was psychotic. Beverly stabilized rapidly and was returned to the community, but her long-term prognosis was not favorable.

### Family Atmosphere

Both John and Beverly had been exposed to neglect and domestic violence. They came from troubled homes with absent fathers. While it is not uncommon for Indian families to share the responsibilities of parenting with members of the extended family,<sup>12</sup> both of these children experienced numerous placements and felt abandoned. John's dilemma about his future and the influence of his role models is a poignant lesson for those involved in the management of troubled children. The structure of, and roles within, Indian families differ markedly from those of other groups. For example, though the father plays an important authoritative role in the dominant Anglo culture, in some Indian tribes a relative outside of the immediate family serves as the disciplinarian, or the authority male may be the mother's brother rather than the biological father.<sup>13</sup>

### Comorbid Conditions

While not well examined in Native youths, Duclos and colleagues found high rates of psychiatric disorders and comorbid conditions in Indian youths detained at a reservation-based juvenile detention center.<sup>14</sup> Substance abuse and depressive conditions are of particular concern and have important health risks.

### Substance Abuse

Studies consistently find greater use of alcohol and drugs in Indian youths than other racial/ethnic groups.<sup>1-3</sup> Indian adolescents are more likely than non-Indians to begin substance use at earlier ages and are more likely to use combinations of substances.<sup>5</sup> Earlier and heavier drug

use in general are associated with greater risk for later problems with drugs.<sup>15,16</sup>

Blum and colleagues found that while most of the youths surveyed denied drinking or reported only occasional drinking, a substantial minority reported weekly or more frequent drinking often beginning in middle school and increasing with age to heavy use in over one-fourth of the males by 12th grade.<sup>4</sup> Approximately one-half of youths in grades 10 through 12 reported use of marijuana.<sup>4</sup> Inhalant use decreased with age.<sup>4</sup> Okwumabua and Duryea found that Native American youths attending boarding school were likely to begin using drugs as young as 10 to 13 years of age.<sup>17</sup> The progression of use in Native American youths from quasi-legal (such as cigarettes) to illegal (such as alcohol and marijuana) to harder illegal (such as cocaine) substances appears to be similar to that of adolescents in general,<sup>17</sup> though not all studies concur.<sup>2</sup>

Substance abuse is commonly associated with delinquency. Studies of general<sup>15,18</sup> and clinical<sup>18-21</sup> populations have documented high levels of comorbid substance use and disruptive behavior disorders. Novins and colleagues found that more than one-third of Native American youths in treatment for substance abuse had depressive symptoms and almost one-half demonstrated antisocial behavior.<sup>22</sup>

Children and adolescents with conduct problems may use substances in an effort to self-medicate a variety of symptoms or to avoid dealing with family problems and abuse.<sup>23</sup> Beauvais and colleagues speculate that poverty and social conditions influence substance use in Native American youths.<sup>3</sup> In studies of Native American youths attending boarding schools, depression, lack of family support, and stress have been found to correlate with alcohol and substance use.<sup>24,25</sup> Alcohol use may also enhance socialization, especially for youths from broken homes, those uninterested in school and those less hopeful about the future.<sup>26</sup> Moncher and colleagues, confirming high rates of substance use in Indian youths, concluded that acculturation, isolation, and behavior modeled after family members and peers were associated with substance use in early adolescent Indian youths.<sup>27</sup>

### **Depression and Suicide**

Depression and alienation also plague Native American youths.<sup>28</sup> Blum and colleagues found substantial distress and depression in a significant minority of Indian youths surveyed.<sup>4</sup> Those who were severely distressed were more likely

to feel alienated from their families, have histories of abuse, have caused a pregnancy or been pregnant and have attempted suicide.<sup>4</sup>

Both John and Beverly were angry and impulsive and both experienced depression and suicidality. This is not uncommon in youths with conduct disorders in whom suicidal ideation and behavior are manifestations of depressed mood, frustration, anger and impulsiveness.<sup>23</sup> Suicide and suicide attempts are serious problems among Indian youths,<sup>5,8,27</sup> though there is great variation by tribe.<sup>29</sup> Grossman and colleagues found history of emotional problems, extreme alienation from family or community, suicide and suicide attempts among family members and friends, use of hard liquor, self-perception of poor general health, history of physical or sexual abuse and female gender correlated with a history of suicide attempts in Navajo adolescents.<sup>7</sup> Blum and colleagues found that Indian youths at high risk for suicide were more likely to have abused drugs, had or caused a pregnancy, had a history of abuse, and had a friend or family member suicide.<sup>4</sup> The problem of Indian adolescent suicide must be viewed with some caution, however, because of the relatively small number of events used to establish rates.<sup>8</sup>

Conduct problems were once considered a depressive equivalent with symptoms thought to represent the developmentally appropriate expression of mood disturbance. More typical symptoms of depression in young children are now recognized. The co-occurrence of depressed mood and impulsive and delinquent behavior raises a number of diagnostic issues. It may be difficult to determine if suicide attempts in these youths are an expression of anger and frustration or manifestations of more typical depressed mood. Of interest in this regard, Sack and colleagues found that depressive symptoms followed conduct disorder symptoms in a sample of latency-age children.<sup>30</sup> Therefore, it is prudent to diagnose and intervene with conduct problems as early as they present.

### **Educational and Learning Problems**

The relationship between education and delinquency is important for several reasons. School is a forum where delinquent behavior is often expressed, and school truancy and dropout are associated with delinquency. Furthermore, Blum and colleagues found school performance correlated with health and social outcomes in a large self-report survey of Native American youths.<sup>4</sup> Those who reported below-average

school performance were more likely to use substances, to have attempted suicide, and to have felt school personnel did not care about them and family members did not understand them.<sup>4</sup>

Because traditional Indian views and behaviors support sharing, discourage competitiveness, and emphasize visual observation rather than verbal forms of interaction and learning by trial and error, Indian children may appear passive, uninvolved, and unmotivated.<sup>28</sup> The school dropout rate for Indian youths is much greater than that of the general population.<sup>5</sup> Students dropout for a variety of reasons — poor performance, failure of the school to engage those of diverse cultures, the priority of family needs, and mere dislike of school.<sup>5</sup> Addressing these issues with human service and/or school-based interventions could reduce delinquency as well as the dropout rate among Indian youths.

### Indian Youths in the Justice System

Both cases presented here involved the police who fortunately identified the two youths as in need of treatment instead of punishment, but who might easily have arrested either of them. In Oklahoma, juveniles accounted for 20 percent of all arrests in 1996 with Native American youths accounting for 7.8 percent of juvenile arrests.<sup>31</sup> The Oklahoma Department of Commerce estimates that 7.9 percent of the population in 1996 was Native American.<sup>32</sup> Therefore, in Oklahoma, there appears to be no over-representation of Indians in juvenile arrests. The high rates of psychiatric disorders in detained Indian youths,<sup>14</sup> however, suggest the importance of diagnosis and treatment of troubled youths in all settings including schools and detention facilities. This is especially true with respect to Native youths because they may be reluctant to utilize state and local health care delivery systems.

### Implications for Health Care

There is no doubt that biology, as well as environment, influence deviance. Deviant behavior tends to run in families. Medical, neurological and psychiatric problems such as central nervous system trauma, child abuse, attention deficit and hyperactivity disorders, school problems, learning disorders and substance abuse are common among delinquents.<sup>23</sup> Whether these concurring factors represent a single etiology, are causally related, are transmitted genetically, and/or are produced or influenced by environmental experiences is unknown, but

their importance in the health of individuals and groups and in the development and practices of health care delivery systems is undeniable.

Health care providers now routinely seek to understand the role of culture in prevention, care seeking and medical compliance. It is essential that we also examine cultural aspects of risk-taking and deviant behavior in youths because these behaviors increase the youth's vulnerability to injury, disability and early death and dramatically burden our health care delivery systems.

Every medical contact with youths should include a history of school attendance and performance; trauma; use and abuse of cigarettes, alcohol, and drugs; and contact with legal authorities. The clinician should encourage discussion of cultural issues, the obstacles they create and the support they provide. When deviance is identified, it must be examined in the context of the child's overall development and health. John's plaintive wondering about his future offered the clinicians treating him an opportunity to discuss options, examine his needs and strengths and shape goals. Youths who have dropped out of school must be counseled to return. Those using cigarettes, alcohol, and/or other drugs must be referred for culturally-sensitive treatment.

As with Beverly, psychiatric symptoms may be difficult to assess, but must not therefore be ignored. Both Beverly and John exhibited suspicious behavior — Beverly to the point of possible paranoia. Such suspiciousness is apt to be more pronounced when a youth enters a treatment facility with unfamiliar caretakers and frightening expectations. Of particular interest, however, was the concern about psychosis in Beverly. Had it not been for the culturally-sensitive resident physician, Beverly might have been prematurely committed to a trial of medication or a prolonged hospital stay. Therefore, all attempts should be made to incorporate lessons about culture in medical training at all levels including continuing education programs for practicing clinicians.

A full decade ago, after years of living and working among Indians, Hammerschlag recognized the power and importance of culturally endorsed ritual in healing.<sup>33</sup> Significant progress in reducing Indian delinquency will ultimately require psychiatric practice that is culture-oriented. That said, the pursuit of etiology, diagnosis, and treatment within the indigenous culture should not preclude examination of factors common to the majority culture for there are

likely to be intrinsic factors that cross cultures.<sup>26</sup> Just as Native American youths have had to live and function to varying degrees in two cultures, so too their problems have been born of, and have developed in, two cultures. □

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## **Squamous Cell Carcinoma of the Breast Following Silicone Injection of the Breasts**

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During the 1960s, injecting liquid silicone into the breasts for augmentation purposes was a common practice. Many women suffered complications, usually developing silicone mastopathy, but there have been reports of carcinoma as well. A case of squamous cell carcinoma of the breast is reported in a patient who had previously undergone injection of silicone into the breasts. Upon review of the literature, this is only the second reported case of squamous cell carcinoma of the breast following silicone injection.

Squamous cell carcinoma of the breast is a very rare tumor comprising 0.04 to 0.075 percent of all breast malignancies. The tumor appears to develop from metaplasia of benign epithelial cells within the breast. Many theories are presented for the development of this metaplastic process. The clinical presentation, evaluation, and treatment of squamous cell carcinoma of the breast is quite similar to that of infiltrating ductal carcinoma of the breast of comparable stage and size.

The practice of directly injecting liquid silicone into the breast has been outlawed for decades in the United States, but during the 1960s it was a common practice.<sup>1</sup> Many women had a poor cosmetic result, and several subsequently developed cancer of the breast. Despite these findings, the practice continues in some parts of the world today. In this article we discuss the history and complications of these injections, present a case of a patient with a history of silicone injection who developed squamous cell carcinoma (SCC) of the breast, and summarize what is known about the uncommon finding of mammary squamous cell carcinoma.

### **History of Silicone Injections**

In the decade between 1960 and 1970, liquid silicone was injected for augmentation purposes into the breasts of an unknown, but substantial, number of women in the United States.<sup>2</sup> The number of patients undergoing this procedure in Las Vegas alone has been estimated at 10,000.<sup>3</sup> Although liquid silicone is approved for soft tissue injection for cases such as congenital disfiguring facial anomalies, it was never approved by the FDA for breast augmentation. In fact, in 1965 Dow Corning Corporation filed a "Notice of Claimed Investigational Exemption for a New Drug" for the use of medical-grade sterile silicone fluid for injection into humans for soft tissue augmentation was filed. Use of the fluid for breast augmentation was specifically excluded.<sup>4</sup> Nevertheless, illicit injections were given by physicians and nonphysicians alike. The procedure was largely abandoned in the 1970s when silicone breast implants were refined. The FDA has now formally banned the use of liquid silicone for breast augmentation. Unfortunately the practice continues in some parts of the world, especially Southeast Asia,<sup>5,6</sup> but also sporadically in the U.S.<sup>1</sup> Much less expensive than augmentation with implants, injectable silicone may appeal to those who are unaware of its dangers.

Another complicating issue of injected silicone was the adulteration of fluid silicone with other compounds in an effort to incite an inflammatory reaction. It was hoped that permanent fixation would occur in the tissues, inhibiting migration of the silicone. One mixture, the "Sakurai formula," involved the use of olive oil. Other oils and even paraffin have been detected in the specimens obtained from patients suffering complications.<sup>7</sup>

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### Complications of Silicone Injections

Once silicone is injected into the breast, many complications can occur. One author has stated that clinical problems are evident in almost half of the women he has seen who have had previous injections of silicone into the breasts.<sup>8</sup> The most severe responses include vascular emboli causing thrombosis and eventual death<sup>9</sup> as well as reports of immediate death after injection.<sup>10</sup> Less extreme, but more commonly seen is the induction of a silicone mastopathy. These inflammatory responses consist of pain, swelling, heat and redness and may occur within a few days of injection or with a delayed presentation years later.<sup>10</sup> Migration of the silicone due to gravity, reportedly as far as the groin,<sup>11</sup> occurs. Local skin necrosis<sup>2</sup> and draining sinuses<sup>12</sup> have also been seen.

### Clinical Findings

Physical exam of the breast in a patient with a silicone mastopathy shows hard masses, diffuse nodularity, areas of retraction due to granulomatous tissue, lymph node enlargement and possible nipple inversion.<sup>3</sup> Although poor cosmesis is present, the more ominous problem becomes the increasing difficulty in detecting breast cancer in the future. Both physician and patient may attribute changes in the breast to mastopathy alone, rather than to possible carcinoma.

Mammography of patients after injection with liquid silicone is notoriously difficult. Ranging from a solid homogenous shadow to multiple nodular shadows of varying sizes, the usual subtle radiographic findings are obscured. Calcification similar to that seen in carcinoma may also be present in silicone granulomas.<sup>3</sup> Evaluation by ultrasonography in such patients appears to be a poor tool.<sup>11</sup> Radiologic imaging should not be abandoned, however, as mammographic detection of carcinoma has been reported.<sup>13</sup>

### Management

Proper follow-up of patients who have had silicone injections includes annual mammography,<sup>3</sup> follow-up MRI scanning of women with questionable mammograms, close patient observation and early surgical intervention<sup>14</sup> in appropriate situations. This includes patients with recurrent mastitis, women with local symptoms and a strong family history of breast cancer, and those with suspicious masses in whom cancer cannot be ruled out with less invasive techniques.<sup>15</sup>

Multiple reviews<sup>16-20</sup> have been published over the past decade showing no increase in the cases of breast cancer among women who have undergone silicone implants. Regarding the older practice of directly injecting liquid silicone into the breasts, no studies identifying an increased rate of breast cancer in these patients are known to have been published. However, sporadic cases of cancer have been reported in women with a history of silicone injections. The types of tumor cells identified include infiltrating ductal carcinoma,<sup>3,6</sup> intraductal carcinoma,<sup>15</sup> adenocarcinoma,<sup>3,11,12,15</sup> metaplastic squamous/pseudosarcomatous carcinoma,<sup>10</sup> inflammatory carcinoma,<sup>9</sup> and one case of pure squamous cell carcinoma.<sup>14</sup> From our review of the literature, it appears that our case is only the second reported patient with pure squamous cell carcinoma of the breast following silicone injection.

### Case Presentation

A 67-year-old white female nursing home patient with marked senile dementia was admitted by her primary care physician for a possible breast abscess. A previous attempt at incision and drainage of the area had been performed by her physician at the nursing home without resolution of the mass. Upon evaluation, the patient had a one centimeter open area inferior to the left areola which had a small amount of light brown gelatinous drainage. There were no palpable axillary lymph nodes, and no peau de orange or nipple discharge was detected. Under local anesthesia, an incision and drainage was performed at the bedside with recovery of approximately 150 cc of brown-tinged gelatinous material as well as a few small necrotic-appearing tissue fragments which were sent for pathologic evaluation. Cultures of the fluid were negative. The pathology specimen revealed papillomatosis.

Attempts at mammography failed due to patient inability to cooperate. Chest radiographs showed no evidence of lung lesions. Due to the suspicious nature of the lesion and indeterminate pathology findings, the patient was taken to the operating room and underwent excisional biopsy. A large cavity, approximately 5 cm × 4 cm × 4 cm in size, with thick mucoid drainage was excised. Pathologic examination of this tissue revealed a well-differentiated invasive squamous cell carcinoma.

Subsequently the patient underwent a modified radical mastectomy, which showed numerous cavities filled with gelatinous material consistent with silicone. Although family members stated that the patient had previously undergone

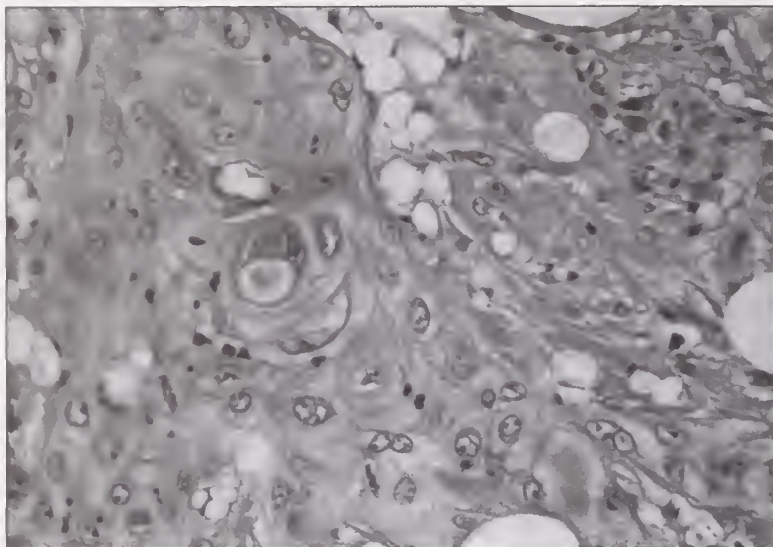


Figure 1.

silicone breast implants, it was apparent that the patient had actually received silicone injections into the breasts. Due to the patient's severe dementia, the exact date of injection of silicone into the breasts is unknown, however, it is estimated to have occurred in the 1960s.

In the mastectomy specimen, a residual well-differentiated squamous cell carcinoma measuring 1.2 cm in diameter infiltrating the fibroadipose tissue was found. (Fig. 1) The breast was permeated with silicone. The tumor was not multicentric and there was no skin involvement. Axillary dissection revealed zero nodes positive for carcinoma; the lymph nodes were also infiltrated with silicone. Hormonal studies showed the tumor to be ER negative and PR negative. The patient received no additional treatment and continues to do well in a nursing home 15 months later.

### **Squamous Cell Carcinoma of the Breast**

Squamous cell carcinoma of the breast is an extremely uncommon tumor, with an estimated frequency of 0.04 to 0.075 percent of all breast malignancies.<sup>21</sup> It is a form of metaplastic carcinoma because glandular breast tissue does not contain keratinizing epithelium. Three conditions must be met in order to diagnose pure SCC of the breast: the patient has no other primary epidermoid tumor present; there is a lack of other neoplastic foci within the tumor such as mesenchymal or ductal cells; and the lesion is separate from cutaneous structures.

How squamous carcinoma originates in the breast is not clearly understood, but many theories have been advanced. Benign metaplastic

epithelial cells presumably develop prior to transforming to squamous carcinoma. Evidence to support this theory includes the detection of squamous metaplasia within the glandular portion of the breast in such benign states as gynecomastia,<sup>22</sup> fibroadenomas,<sup>23,24</sup> benign cystosarcoma phyllodes, and papillomas.<sup>25</sup> Nonglandular portions of the breast can also harbor benign metaplastic squamous epithelium, including the lining of cysts in fibrocystic disease,<sup>26</sup> in papillomatosis and in hyperplastic mammary ducts.<sup>27</sup>

Many substances have been shown to induce squamous metaplasia. Cyclic adenosine nucleotide has been proposed as the foremost promoter of benign squamous metaplasia involving the breast.<sup>21,26,28</sup> Schaefer, et al<sup>29</sup> showed that breast tissue obtained from women in the latter third of the menstrual cycle was more quickly transformed to squamous epithelium than tissue from women early in the cycle, indicating that estrogen or progesterone may contribute to the metaplasia. Other experimental studies have indicated that estrogen excess,<sup>30</sup> and lack of vitamin A<sup>31</sup> can produce squamous metaplasia in animals. Infection and inflammation have also been proposed as inducers of squamous metaplasia,<sup>32</sup> and certain individuals may have an inherent genetic predisposition to develop squamous metaplasia.<sup>33</sup>

Another theory regarding the presence of squamous epithelium within the breast comes from an embryological perspective.<sup>34,35</sup> The breast arises as an invagination of the integumentary ectoderm at the three-layered developmental stage. The eventual ductal and secretory elements are derived from the basal layer of the ectoderm. It is possible that while this invagination is occurring, an ectoderm-derived tissue bud could be isolated within the breast and eventually become squamous carcinoma.

It has been postulated that a traumatic event could result in the implantation of epithelial tissue from the overlying skin into the breast. Once present, the squamous tissue could undergo malignant transformation. One review of 17 cases stated that two patients had a history of penetrating trauma to the breast.<sup>34</sup> Benign squamous epithelium has also been reported lining the capsule surrounding a breast implant.<sup>36</sup>

With regard to the presence of a foreign substance such as free silicone in the breast, several authors have commented on the relationship between SCC and areas stimulated by chronic epidermal hyperplasia.<sup>14,35,36</sup> For example, SCC has been documented as a complication of chronic hydradenitis suppurativa.<sup>37</sup>

osteomyelitis,<sup>38</sup> and pilonidal cysts.<sup>39</sup> Marjolin's ulcers are SCC of the skin which occur in chronically inflamed areas including ulcers and burns.<sup>40</sup> A squamous cell cancer was also reported in proximity to a war missile which had been present in a patient for more than 30 years.<sup>41</sup>

**Clinical Presentation**

No pathognomonic clinical feature distinguishes SCC of the breast from other breast tumors. The average age at diagnosis is 54 years.<sup>21</sup> Frequently the lesions are large at diagnosis, averaging 5 cm in size. This can result in the tumor becoming fixed to the chest wall or extending into and ulcerating the skin. When the skin is involved, the diagnosis of primacy SCC of the breast is difficult to make. However, Rosen<sup>26</sup> states that "when the bulk of the tumor in the breast and the clinical history indicates that a breast mass preceded skin ulceration, the lesion may be considered to be a mammary carcinoma." We believe that our case fulfills these criteria for inclusion as a pure SCC of the breast.

Calcification of the squamous tissue occurs and is evident on radiographs, however, no constant mammographic characteristics have been identified. Testing for estrogen receptor activity has shown most SCC to be negative or only weakly ER positive, below the levels required for therapeutic response potential.<sup>21,26,28,42,43</sup> This is expected for a tumor consisting solely of squamous cells.

**Microscopic Pathology**

Light microscopy of SCC shows large polygonal cells with generous amounts of eosinophilic, weakly PAS-positive cytoplasm and prominent nucleolated, and often mitotic nuclei. Keratin formation and intercellular bridges are also present. Careful examination must rule out the presence of invasive neoplastic glandular elements in order for SCC to be diagnosed.

**Evaluation and Treatment**

Prior to diagnosing SCC of the breast, it is necessary to exclude a metastatic lesion from an extramammary primary carcinoma. Multiple sites have been reported as metastasizing to the breast, including the oral cavity, the esophagus, lung, bladder, renal pelvis, uterine cervix, and ovary.<sup>26,28,34</sup>

Management of mammary SCC should follow the same principles as for adenocarcinoma

of the breast of comparable size and stage.<sup>21,42</sup> SCC in sites other than the breast are generally radiosensitive, and presumably a small breast squamous carcinoma could be managed by lumpectomy, axillary dissection and adjuvant radiation therapy.<sup>21</sup> However, radiotherapy has shown little benefit.<sup>44</sup> It is not clear from this report whether this was due to a mixed adenomatous and squamous subtype being treated or inappropriate use of radiation in patients with systemic disease.<sup>42</sup> In many patients this question is inconsequential due to the large size of the tumor, necessitating mastectomy. The involvement of the lymphatic system is unpredictable<sup>42</sup> and axillary dissection is recommended to adequately stage the patient.

The use of adjuvant chemotherapy has been used inconsistently for SCC and no established regimen has undergone rigorous prospective controlled studies. Stevenson, et al<sup>42</sup> have proposed a regiment of CDDP, 5-FU, and adriamycin.

**Prognosis**

Although the incidence of SCC of the breast is too small to provide a conclusive estimate of the prognosis in those patients, most authors agree that it differs little from infiltrating ductal carcinoma of the same stage.<sup>14,26,34,42,45</sup> Early reports of extremely poor prognosis<sup>46</sup> may also reflect a lack of chemotherapy administered to the patients.

**Summary**

In conclusion, squamous cell carcinoma of the breast is a relatively rare tumor, whose prognosis differs little from infiltrating ductal carcinoma of similar size and stage. Unfortunately, in women who have had liquid silicone injected into the breast, most tumors will be difficult to detect either by physical exam or mammography and the diagnosis may be delayed.

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## Reflections of Thrombosis Research in Oklahoma City— 1975 to the Present

***To clot or not to clot. That is the question.***

by Richard Green

**T**hrombosis researchers use analogies to describe their work to people outside the field. Studying the coagulation and anti-coagulation systems is like disassembling a car engine to see how each part works; or watching a football game; or fighting a battle. While each of these analogies is somewhat helpful, the main impression left by them may be that most of the researchers must be men.

**T**he researchers know the analogies suffer to some extent. But the complexity of the chain reactions governing clotting and anti-clotting are so bewilderingly complex and mysterious—even to the most knowledgeable scientists—that few outside the brethren can follow the unalloyed technical descriptions and explanations.

During the '60s and '70s, most thrombosis research focused on the biochemical reactions involved in the process of blood clot formation. As this knowledge became available and with the advent of molecular biological techniques, it became possible to identify and examine the anti-coagulant factors and cellular proteins that are involved with blood clotting systems. These developments contributed to the complexity of an already very complex process. But they held the key to the initial understanding of how the body prevents the formation of unwanted and potentially lethal blood clots and to the development of better diagnostics and therapeutics.

While contributions to the thrombosis research effort have come from scientists around the world, a group of research investigators working at the Oklahoma Health Center in Oklahoma City has contributed an exceptional amount of pertinent knowledge. One bona fide breakthrough made nearly 20 years ago, explaining how the body regulates blood clotting, has not been eclipsed yet in importance by anyone working in the field. That discovery and others made locally have been

incorporated into multi-center clinical trials. The data may lead to improved treatment or the prevention of the entire thrombosis panoply including heart attack, stroke, deep-vein thrombosis and septic shock, among others.

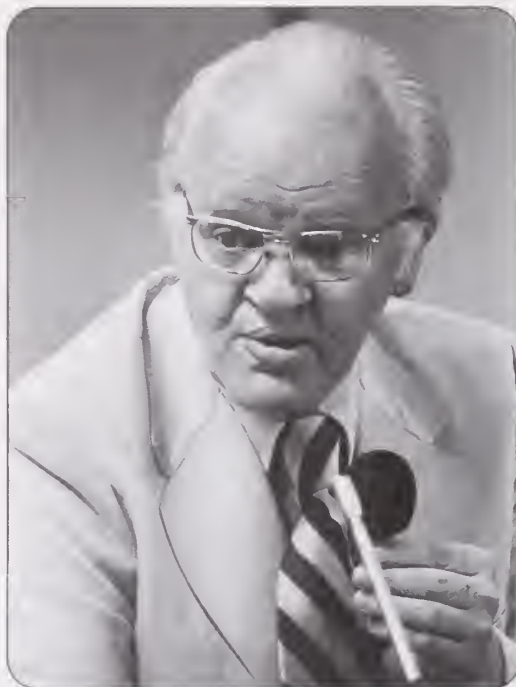
Although the group's individual members have appointments at both the Oklahoma Medical Research Foundation and University of Oklahoma Health Sciences Center, their basic research work is done at OMRF. Its Cardiovascular Biology Program, is one of the world's best in productivity and prestige.

One reason that these Oklahoma scientists enjoy this world-class stature is that the remarkable effort that has developed was rooted in excellence, dedication and resilience 25 years ago. As with most human affairs, an enhanced perspective of the present begins with the past.



**F**letcher Taylor was nervous. They were about to turn on the TV lights and aim their cameras directly at him. At this news conference in April 1975, he would announce that the National Institutes of Health had awarded his thrombosis research team a grant of \$3.2 million, then the largest single research grant ever awarded to the University of Oklahoma.

If the setting wasn't unnatural enough for Taylor, worse still was his immediate mission: to



**Fletcher Taylor**

translate the scientific jargon with which he was so comfortable to prose that the ordinary sixth grader (TV's fabled target) could understand. On top of that, Taylor has a speech impediment that takes a little getting used to. Still, he had thought about how to keep his message simple with a judicious analogy or two. And he reminded himself that he was announcing good news, not a plant layoff or an IRS investigation.

After announcing the grant award, Taylor gave a status report that underscored the importance and urgency of this type of research. He said that thrombosis caused 60 percent of all deaths, according to the World Health Organization. Then, he ticked off some of the reasons, and conversely, some of the challenges. No blood assays existed for the early detection of clots. No safe or effective method of monitoring treatment existed. The standard blood thinners, heparin and Coumadin, had a narrow and unpredictable therapeutic range: too little and the clot or clots could grow to lethal proportion, too much often caused patients to hemorrhage internally.

This relatively unsophisticated state of affairs stemmed, in large part, from the fact that scientists could only study blood clots that were formed in test tubes. So many unnatural chemicals had to be added, either to prevent them from forming or dissolve them, that the results were not clinically useful.

Taylor fielded the reporter's questions deftly. As his confidence rose, he injected humor into his remarks and occasionally spoke from the heart. He had been a medicine resident in San Francisco, he said, looking forward to joining the internal medicine practice of his father in the Bay Area. But when the time came in 1962, Fletcher told his father that being on a stroke service during his residency had changed the direction of his life; he wanted to do more than hold the hands of the dying. Moreover, he had been befriended by some mentors at the University of California at San Francisco who were willing to help him begin studying thrombosis at the molecular level. He told his father that the effort would take perhaps 15 years.

Taylor was in his fifteenth year when he was recruited to OU from the University of Pennsylvania. While most of his thrombosis research colleagues had been concentrating on the clotting system, Taylor had targeted the clot-dissolving system, which was then incorrectly believed to have been pretty well mapped out. It had been known for years that the clotting and anti-clotting systems were chain reactions or cascades working more or less simultaneously in response to an injury. The conventional wisdom held that the important players of both systems, both known and unknown, were contained in the plasma. But by the mid-1970s, Taylor had evidence that an enzyme in the anti-clotting system, tissue plasminogen activator, was released from the vessel wall, a material hitherto thought to be as inert as a garden hose. That discovery was a prelude to a much bigger discovery to come in the early 1980s.

Taylor's arrival in 1974 followed a period of financial crisis at the OU Health Sciences Center (HSC). To avert a possible financial collapse only two years before, the university had relinquished administrative and fiscal control of its two teaching hospitals. If Taylor had been available then, OU probably could not have accommodated him and his research group. New institutional leadership and support from the Legislature changed the HSC's modus operandi from survival to expansion. However, the mid-70s turned out to be only a narrow window of opportunity, as later the leadership changed again, legislator critics spoke up and fiscal support again went south.

The \$3.2 million enabled Taylor to build and equip labs and fund the basic research projects for himself and his collaborators, Philip Comp, a research physician who had come with him from Penn, and Drs. Jordan Tang and Chad Cox. The funding also created a thrombosis and coagula-

tion service at University Hospital (then known as Oklahoma Memorial Hospital). Among other things, the service run by Taylor and Comp would investigate a clot lysis assay, developed by Taylor, which might be diagnostic, cheaper and less painful than a venogram.

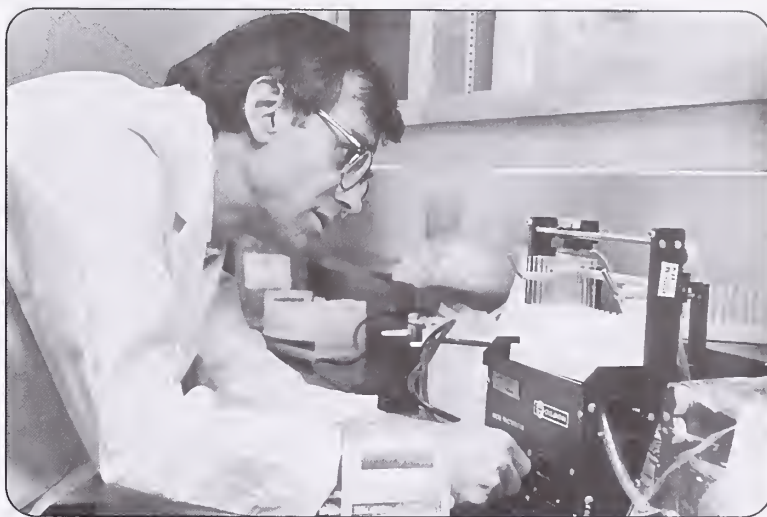
The NIH research funds also permitted Taylor to recruit collaborators as the project continued. "I was looking for people who were serious about research, but not serious about themselves. And I wanted people who I thought would fit in with the group," said Taylor.

His recruiting experience was forged, he says, when he was a cowhand on Nevada cattle roundups during his teenage years. "Watching those guys work with their hands and with animals, you could quickly spot the men with energy and motivation. That's the kind of person I wanted. I didn't want someone I could be intellectually comfortable with. You want someone who will burn your butt from time to time for good reason. I wanted people who were smarter than me. It was my job as director to help them get started, then get out of the way and let them do their work."

Taylor's first recruit was Chuck Esmon, a 29-year-old protein chemist with training and experience in the blood clotting system at Washington University and the University of Wisconsin. Driven, very bright and intensely curious about the basic mechanisms of life, Chuck was also pragmatic. He wanted to study a system that might generate something of practical value and therefore remain fundable. More specifically, he wanted to know how the circulating plasma protein thrombin causes blood to clot.

It was known that the enzyme factor Xa was involved in thrombin activation, but that Xa required a helper protein, factor V, a very large and complex molecule. Purifying it would be a daunting task, but would probably hold the key to understanding thrombin activation. The techniques in 1976 were "very crude," he said. "We didn't even have good handles on whether or not we were succeeding. It was endless scut work, trial and error. Chuck was aided to an extent by his wife, Naomi Esmon, whom he had met when they were graduate students at Washington University. Now, she was working in Jordan Tang's lab at OMRF. But he did his best, most creative science when he got together with Whyte Owen, then with the University of Iowa.

They were the Lennon and McCartney of thrombosis research. Their talents and expertise not only meshed, they were synergistic, according to Naomi. "When they were in the lab and bounce-



**Phillip Comp**



**Chuck Esmon**

ing ideas around, it seemed like they were always finishing each other's sentences." By 1979, factor V was purified and its activation was better understood. This was a crucial prelude to understanding thrombin, which was instrumental to both clotting and clot dissolving.

But thrombin by itself was not an effective clot buster. They knew that from test tube experiments; add thrombin and the clot would take forever to dissolve. Simultaneously, Chuck and Whyte Owen had begun a series of experiments on protein C, which had been discovered in the mid-1970s. Because it was a vitamin K-dependent protein, protein C was thought to be part of clotting. But when they added activated protein C



**Naomi Esmon**

to blood, clot formation was delayed, only a tiny clot formed, which dissolved spontaneously, something that blood clots in test tubes never do. When they added activated protein C (APC) to a test tube containing a clot, it broke apart within seconds.

It was obviously part of the clot dissolving cascade—big news, because most investigators had assumed that they knew what made clots dissolve. The next step was to identify what activates protein C. Testing and more testing showed that the activator apparently was not in plasma or whole blood. What else was left? The vessel wall. More specifically, its endothelial cells, which Fletcher Taylor and others had demonstrated, were capable of expressing molecules.

But growing endothelial cells in culture was a huge technological obstacle in the late '70s. So Chuck circulated plasma through the vessels in pigs' ears and then ran very precise test tube clotting assays. The results were simultaneously disappointing and promising. Plasma run through the pigs ears took two seconds longer to clot than control plasma. Whyte Owen, whose specialty is physiology, told Chuck that because pig's ears are not essential to life, the capillaries probably had shut down when the animal was slaughtered. At that time in Iowa, Whyte was studying thrombin control factors by running solutions through an animal's heart. Why didn't Chuck bring some protein C up to Iowa and run it through his animal hearts? In the fall of 1980, Chuck ran protein

C through the heart and the clot formed in the normal 20 seconds. Then, they tried protein C and thrombin and watched in amazement as the plasma didn't clot for 45 seconds. This was a genuine eureka-type moment in science. "When Chuck phoned to tell me the news I was literally jumping up and down," Naomi recalls.

Thrombin was binding with a factor that speeded up the activation of protein C by 20,000 times! Further testing showed the factor was indeed on the endothelial cells, not the smooth muscle cells of the vessels. Chuck, Whyte and Naomi had the factor purified in 1981 and discovered that it was a novel, membrane-associated protein. All the testing is chronicled in some notebooks in Naomi's office at OMRF; they wrote the experiments in black ink and the results in red. After several futile sessions attempting to name the new factor, Whyte delivered one that stuck: *thrombomodulin*.

But would APC dissolve clots in a person's blood vessels? Presumably the answer was yes, but at what cost? Would the patient die of internal bleeding? In 1981, Chuck said, "We've infused a lot of lab animals with activated protein C and haven't lost one yet."

The discovery of *thrombomodulin* looked like the key to understanding the anti-coagulant pathway. If APC proved safe and could be harnessed and targeted, the potential clinical applications were immense. Only partly tongue in cheek, Naomi said, "Maybe one day instead of taking vitamin C we'll all be taking activated protein C."



One application of Esmon's discovery that was recognized in 1981-82 was to test APC in certain cardiac patients, such as those with unstable angina or those who were at-risk for thrombosis following heart surgery or angioplasty. Comp says that at the time, the group could not overcome the technological obstacle of being able to produce enough APC, and keep it stable, for large clinical trials.

Three applications were not immediately obvious. After the discovery of protein C, it was learned that another factor, called protein S, is necessary for optimal protein C activation. Phil Comp began studying protein S from A to Z, so to speak. Among other things, he wanted to know if a relationship existed between plasma levels of protein S and thrombotic diseases. (By the way, the the role of blood clots in stroke and heart attack was not well defined medically in the 1970s. The reason: clots usually had dissolved

prior to autopsy.) Comp and Esmon discovered that people with hereditary deficiency of protein S were at high risk of developing venous thrombosis in their twenties and thirties. Moreover, Comp found that pregnancy, birth control pills, and smoking significantly decreased protein S levels. That fact, he suspected, might play an important role in the association between these factors and thrombosis. The only way to find out was to run assays on a large number of patients over several years.

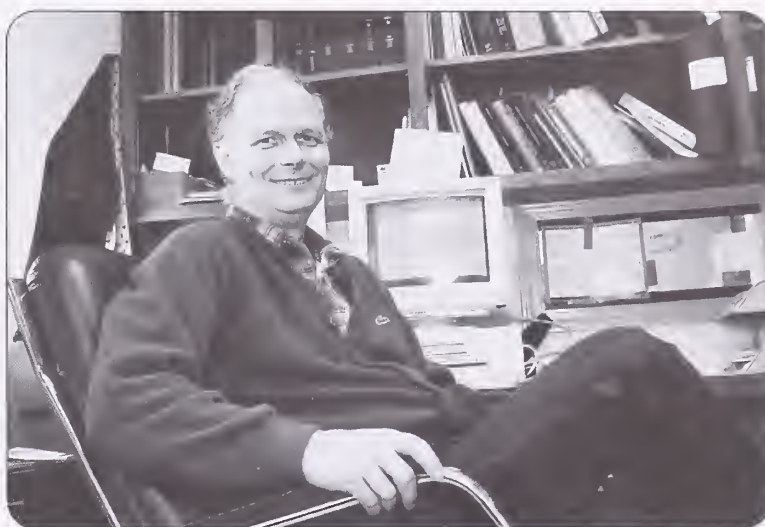
In a second application, Chuck Esmon and Phil Comp collaborated to develop a solid-tumor animal model. "Tumors would normally clot themselves off if it weren't for the protection of the protein C system," Comp explains. "If you inhibit the protein C system with antibodies near the tumor, it will clot itself off naturally."

A large pharmaceutical company was interested enough to evaluate it, but when it didn't cure every animal model they tested, Comp said, they lost interest. That, he thought, was shortsighted. "No cancer treatment works with every tumor in every animal model," he said. Still, he knew only big corporations have the wherewithall to invest to make enough of the antibody for large clinical trials. Furthermore, Comp and Esmon know that their tumor research is only one of a large number of promising leads that the big pharmaceutical companies may pursue. Companies want to invest in the surest thing they can for the biggest payoff.

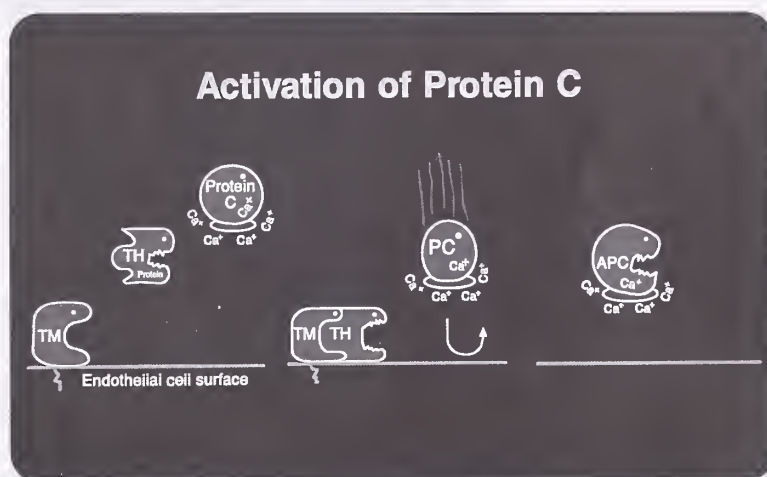
A third application of the discovery of thrombomodulin was discerned by Fletcher Taylor in the early 1980s following some surprising results from one of Lerner Hinshaw's experiments. When the OU physiologist circulated blood extracorporally through a dog, no blood clots formed. "Blood flowing through the pump and tubes should clot, but obviously something was happening that was preventing clotting," Taylor said.

Next, Hinshaw, a nationally renowned researcher in septic shock, challenged the animals on the pump with high doses of endotoxin to see if whatever was happening via the pump might delay or mitigate the resulting signs and symptoms. Most of the animals survived, when all of them probably should have died.

At this point, Taylor and Esmon decided to follow a hunch. Maybe thrombin was being released, which bound to thrombomodulin to produce APC. That could explain the absence of blood clots and perhaps even account for the protection from the endotoxin. If so, such evidence suggested that septic shock might be a clotting



**Chuck Esmon**



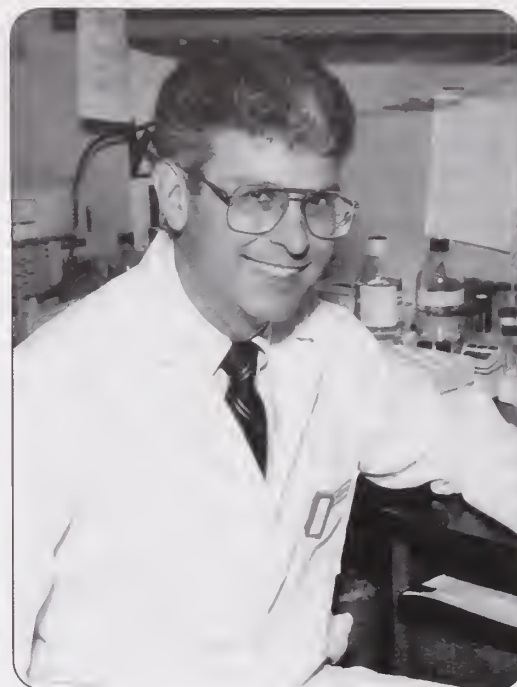
### Activation of Protein C

This cartoon by Chuck Esmon shows the steps in the protein C activation at the level of the capillary. On the left, protein C is in the plasma. Its enzymatic active site is closed (mouth shut) and it is not an anticoagulant. Thrombin (TH) has been generated by the blood-clotting cascade and is busy making blood clots. Thrombin does not see or care about protein C. In the middle panel thrombin binds to thrombomodulin on the endothelial cell surface. The shape of thrombin's mouth changes and it is now very willing, and in fact eager, to convert protein C to activated protein C shown on the right. Activated protein C is a potent anticoagulant and feeds back on the clotting cascade (not shown) to stop further clotting.

disorder. Previous studies had determined the amount of thrombin required to activate protein C in vivo. Therefore, this small amount of thrombin was infused before the endotoxins, and most of the animals lived with no signs of bleeding.



**Jim Morrissey**



**Rodger McEver**



In the late '70s, the HSC budget and support in the Legislature were again decreasing. The institution's major capital expansion in the seventies had far eclipsed the HSC's ability to fill up the new buildings with equally impressive faculty and adequate staff. Some faculty were leaving for greener pastures and the money to recruit good replacements was often not there. This financial crisis forced the HSC to reassess priorities. As a result research programs were deemphasized.

Odds were the thrombosis group would split up and everyone would go his or her own way. In an effort to keep everyone together, Fletcher Taylor met with Dr. William G. Thurman, president of OMRF since October 1979. "I said we were loyal to Oklahoma and would like to stay together," Taylor said. Thurman told Taylor that he thought something could be worked out. In 1982, the thrombosis research program moved to the OMRF, where it has remained to this day.



Fletcher Taylor directed OMRF's cardiovascular biology program until 1991. He continued to recruit new members, and most stuck, as they say

in thrombosis research. Research physician Rodger McEver, who graduated from Oklahoma City's John Marshall High School, left the University of Texas Health Science Center at San Antonio to join the group in 1987. Two years later, Jim Morrissey came to the group from the Research Institute of Scripps Clinic in La Jolla, California. Not only did they mesh with the group, they brought their own experience, perspectives, creativity and tenacity to the field.

McEver didn't get into research until he had almost completed an internal medicine residency at Washington University in St. Louis. "During my clinical training, my image of the average academic physician was somebody sitting around reading journals," he says. But when he landed a fellowship in hematology and oncology and began doing his own research, his viewpoint changed. Now, 20 years on, McEver has found research to be "very hard, very demanding work, but when things go right, it is exhilarating. You have to be constantly developing and refining ideas, okay, and adjusting to what scientists around the world are reporting. There are a lot of ups and downs, dealing with failure. That's why it helps to be in an environment with people who are smart and supportive."

The environment was a major reason why McEver brought his NIH-sponsored research on platelet activation to the HSC and OMRF. Since

then, his research has broadened and deepened to include a more global account of how platelets, endothelial cells and leukocytes adhere to one another as a response to injury or infection. Integral to this understanding was a protein he discovered and purified. He also cloned the gene that expressed it to learn its structure—the prerequisite to manipulation. McEver learned that when the protein is activated, it migrates from inside the platelets and endothelial cells to their surface and kicks off the adhesion process. At roughly the same time, scientists working at other institutions discovered two other similar proteins. Now, the three types are called selectins and are being studied worldwide, not only at the basic level but by pharmaceutical companies hoping to develop potential anti-thrombotic agents.

Meanwhile, McEver tries to increase his biochemical understanding of how selectins interact with particular counterstructures on cells to allow adhesion to occur under the shear forces occurring inside the vessel walls. He has videotapes of the process occurring in real time in animal models. Most of the leukocytes go whizzing by, but at the site where the endothelium has been aggravated, some roll along in slow motion and stick to the vessel wall and then each other. If this inflammation process continues down into the tissues, clots may form. “There is a delicate balance here,” McEver says. “Mobilization of leukocytes contributes to hemostasis, but if the process is uncontrolled it can be very destructive in both acute events (such as blood clots) and chronic events (for example, rheumatoid arthritis). That’s where we are trying to play a useful role. Over the past 20 years, the connection between figuring out how something works and how to fix some related problem really has been shrinking.”

Jim Morrissey began his career in developmental biology working on slime molds, but found the field hard to crack into. He switched to breast cancer, then quickly determined his mentor’s research was going nowhere. Despite his feeling that blood coagulation was probably a boring field, he joined a Scripps colleague who had a coagulation laboratory. To the contrary, Jim was fascinated. He wanted to know everything about the clotting cascade, particularly its initiation. He was involved in the initial cloning of tissue factor, the protein that initiates blood clotting, both normally and in disease states, by binding to factor VII.

About this time, he was interviewed by Chuck Esmon for an established investigator’s award from the American Heart Association. He received the award and two years later brought

the funding to OMRF and set up his own lab.

Factor VII levels had been shown to be a risk factor for heart attacks in a large prospective clinical study in Europe. The problem, however, was that tissue factor converts factor VII to the enzyme VIIa, and acts as a potent co-factor of VIIa enzymatic activity. So when Jim added tissue factor to plasma, the sample turned out to be an aggregation of mainly VII and some VIIa. Both were essential to clotting, but he suspected that the enzyme VIIa might be a very sensitive marker of one’s risk to develop blood clots. He was able to create a mutant tissue factor molecule that would only act as the co-factor to VIIa. Thus, for the first time, he was measuring only VIIa, which he noted was inversely proportional to clotting time; the more VIIa in a sample, the shorter the clotting time.

“Since VIIa seems to be priming the coagulation system, high levels of VIIa may tip the balance toward rapid clot formation or getting a larger clot from the same amount of stimulus,” speculates Morrissey. But Morrissey and OMRF have obtained a patent on the assay, which is being applied to several clinical trials in the U.S. and Europe. One study, with Phil Comp and cardiologist June Eichner, was reported on at the 1998 annual meeting of the American Heart Association. About 400 patients who had angiography were followed for three years. Of those who died (of any cause), Morrissey says, factor VIIa was the strongest risk predictor of death and was not related to other risk factors. Those patients will continue to be followed for a few more years.

The VIIa assay could be a sensitive risk predictor in unhealthy people or give assurance to others that they are relatively risk-free. Much work remains to be done. “I don’t know why VIIa levels are what they are or how they change over time. Can they be reduced, and how? Maybe VIIa levels can be useful in monitoring low dose anti-coagulant therapy for people who aren’t at very high risk.”

Meanwhile, success with thrombomodulin had not spoiled Chuck Esmon; he was just as tenacious and productive in pursuing new leads and spin-offs relative to his discovery of how protein C is activated. He and Naomi run an increasingly big lab operation of post-docs and research fellows. In 1988, he was named Oklahoma’s first Howard Hughes Investigator, a nationally prestigious honor accorded to only a little more than 300 medical investigators in the U.S. He holds or co-holds 10 patents granted to the investigators and OMRF that stem either directly or indirectly



**Dr. Fletcher Taylor in his lab in the late '70s.**

from his discovery of thrombomodulin as the activator of protein C. As a man with so much talent, expertise and experience, he has spent an increasing amount of time consulting with pharmaceutical and biotechnology companies nationally and internationally. In 1991 when Fletcher Taylor stepped down as head of cardiovascular biology, Esmon was named to replace him.

One of the most recent patents granted to him and OMRF was for his lab's discovery of a protein C receptor in the endothelial cells of the vessel walls. Though he still doesn't know all of its functions, he strongly suspects it will be an important player in the protein C anticoagulant pathway. It is known that the receptor is elevated in a variety of disease states, particularly in the large vessels. A diagnostic test is being developed in his lab.



Thrombosis research in Oklahoma enjoyed a banner year in 1996. Separate applications for a program project and a Specialized Center for Research grant were approved for funding by the National Institutes of Health. These applications provided nearly \$6 million each in direct support to research in thrombosis and brought in more than \$12 million to the state. Since both applications involved scientists at OMRF and the HSC about equally, the decision was made to have one submitted by the HSC and one through OMRF. The SCOR grant's title: "Thrombosis: Etiology, Risk Factors and Treatment" connoted how ambitious the grant proposal was. Since the project has a large clinical component, it was thought

that the principal investigator (P.I.) of the SCOR grant should be an M.D. So Rodger McEver, with some prodding from the others, volunteered.

The P.I. of the clinical component of SCOR is not McEver, but a Canadian-trained clinical epidemiologist, Gary Raskob, who specializes in designing clinical studies. The study will eventually involve 600 patients treated with heparin for deep vein thrombosis (DVT) in one of 13 participating hospitals in Oklahoma City, Tulsa, and the Muskogee VA Medical Center. The DVT, diagnosed using a venogram or ultrasound, must have been the participants' first and they must still be on a six-month course of the oral anti-coagulant, Coumadin. Following the six-month course, volunteers are randomly selected to either cease treatment or continue the Coumadin therapy for an additional two-and-a-half years. Those ceasing treatment will still be evaluated at six-month intervals throughout the study's duration.

Despite the fact that Coumadin has been the out-patient drug of choice for more than 20 years, no one knows how long patients at risk for DVT recurrence should be taking the medication. What is known, says Phil Comp, is that the average chance for recurrence is seven percent per year versus a one percent per year risk of developing a serious bleed.

What he and Raskob hope the study will provide to practicing physicians is a relative benefit-risk profile for subsets of patients through clinical information and/or the lab assays of Esmon, McEver and Morrissey. "We want to demonstrate with our data that people who fit a patient profile should benefit from a longer course of Coumadin, while people in another profile possibly should not be treated with Coumadin at all. Of course," Raskob says, "we won't have any answers for at least two more years. Furthermore, we are saving blood samples so that in five years when new things are known or new problems are identified, we can go back to our samples and test them."

The importance of the clinical trial is underscored by Raskob who points out that DVT is as common as stroke and that the incidence of DVT has been increasing. This is due to America's increasingly aging population and the fact that more surgery is being performed on older, sicker patients, particularly hip and knee-replacement surgery. More DVT means more deaths from pulmonary emboli, says Comp. "There are 300,000 such deaths annually in the U.S. and it is a condition that is not only treatable, but preventable."

Yes, says Comp, there are ways to reduce the

DVT incidence today. Studies, including one involving 20 hospitals in Oklahoma, show that some surgeons are not applying proper prophylaxis to their post-surgical patients. In the Oklahoma-based study run by Dr. Dale Bratzler and Gary Raskob, less than 40 percent of all general surgery patients received any preventive measures against clots, and only two-thirds of them were handled optimally. The study was published in the September 28, 1998 issue of the *Archives of Internal Medicine*.

Other measures that physicians can employ that Comp believes could significantly reduce blood clot incidence are using low molecular weight heparin and hospital-based anticoagulation clinics for monitoring patients on Coumadin. "Because low molecular weight heparin isn't administered IV, you can get your knee or hip patient on physical therapy sooner. Instead of the patients losing two weeks (of PT time) and really running a high risk of DVT, they don't lose any time."

Putting a patient on Coumadin for three to six months is a major undertaking and headache, Comp says, because its "still narrow therapeutic window has to be monitored very carefully. It is highly technical, can't be done over the phone and the reimbursement rate is relatively low. Monitoring should be done in clinics devoted to that purpose, where people do the work fulltime," he says.



Fletcher Taylor is in his thirty-fifth consecutive year of research funding from the National Institutes of Health. And contrary to the conventional wisdom that medical researchers do their best work relatively early in their careers, Taylor has been enjoying his most productive years as he approaches age 70. Spending 15 years and thousands of hours developing a baboon model for sepsis has paid off. According to Comp, Taylor demonstrated the potential clinical usefulness of activated protein C for the treatment of sepsis. "Based on Fletcher's work, the Eli Lilly Company

is running a huge North American study, in which 2,280 patients with severe sepsis from all causes will be enrolled in 120 centers. They are the sickest of the sick. All would die without treatment and 30 percent will die with conventional treatment. Some of the patients will be selected randomly to receive the conventional treatment plus an infusion of activated protein C for 96 hours."

Of course, the Phase II trial results were encouraging and there have been several anecdotal reports of European children and adults recovering from deadly meningococcal sepsis with protein C treatment. Before and after photos are incredible; babies who looked like they were covered with third-degree burns, adults with large patches of black necrotic lesions—all healing within a couple of weeks of protein C treatment.

Comp is participating in the study, Taylor is not, except as a consultant. Though he has been happy with his research results, in which the mortality rate of the septic baboons was decreased by 75 percent with activated protein C, and is happy to see the clinical trial underway, he is aware that what works in the primate may not work consistently in the hospital setting.

E coli administered to baboons will produce a variety of responses, Taylor has found. Some die within hours; others escape early death and the lethal chain of mortality for up to four days. "It's sort of like the game, *Dungeons and Dragons*, where you move from room to room surviving the poison darts and dragon attack only to succumb to some other unforeseen invader. Generally, we can protect animals with APC, but some slip by. With APC we have a gun, but not a gunsight. I want to be able to point that sucker accurately. We can't do that until we have laboratory tests that guide our APC therapy as reliably as the test for blood sugar guides insulin therapy. To start to develop such tests, Taylor visualizes the endothelium as an organ that is stressed and observed for the various responses. We want to test the endothelial protein C reserve in patients at risk just as the cardiologist tests the cardiovascular reserve so we can find out ahead of time how much risk he has and how he will react." □

**Photo Credits**

1. Fletcher Taylor, page 132. Dr. Taylor at a press conference. Courtesy of the University of Oklahoma Health Sciences Center, Photographic Services.
2. Phillip Comp, page 133. Dr. Comp, about 1980. Courtesy of the University of Oklahoma Health Sciences Center, Photographic Services.
3. Chuck Esmon, page 133. Dr. Esmon, around the time he discovered thrombomodulin. Courtesy of the University of Oklahoma Health Sciences Center, Photographic Services.
4. Naomi Esmon, page 134. Courtesy of the Oklahoma Medical Research Foundation.
5. Chuck Esmon, page 135. Courtesy of the Oklahoma Medical Research Foundation.
6. (ADD SLIDE) "Activation of Protein C," page 135. Slide of original cartoon by Chuck Esmon.
7. Jim Morrissey, page 136. Courtesy of the Oklahoma Medical Research Foundation.
8. Rodger McEver, page 136. Courtesy of the University of Oklahoma Health Sciences Center, Photographic Services.
9. Fletcher Taylor, page 138. Dr. Fletcher in his lab in the late 1970s. Courtesy of the University of Oklahoma Health Sciences Center, Photographic Services.

# NEWS

## Medicine Day a Success

The 1999 OSMA/OSMAA Medicine Day at the Capitol was a success. Held on Wednesday, February 3<sup>rd</sup>, just two days after the 47<sup>th</sup> Oklahoma Legislature convened, more than 125 physicians and spouses attended Medicine Day. The day's events included a visit to the House Chamber, where attendees were able to hear Frank Keating, Governor; Loyd Benson, Speaker of the House; Bernest Cain, Chair of the Senate Human Resources Committee; and Fred Morgan, House Minority Floor Leader.

Introductions in the House Chamber were made by Mary Anne McCaffree, MD, OSMA President; Diane Cooke, OSMA Alliance President; and Sherry Strebel, Medicine Day Chair. Edward N. Brandt, Jr., MD, PhD, presented a legislative update. Attendees were also given an opportunity to speak to their state legislators about healthcare issues.

## OSMA Legislative Agenda Proposed

The Oklahoma State Medical Association (OSMA) has proposed an aggressive legislative agenda for the upcoming session of the State Legislature. Included in that agenda are the following:

- To seek statutory protection from discovery in court proceedings of information generated from hospital Quality Improvement Committees (a.k.a. "Peer Review Protection"). The OSMA Board of Trustees voted to participate in The Coalition for Quality Patient Care with the Oklahoma Hospital Association, the Oklahoma Osteopathic Association, and other interested parties to seek passage of HB 1443, "Oklahoma Health Care Quality Improvement Act," by Betty Boyd (D-Tulsa).
- Strongly support "Mental Health Parity."
- Initiating changes to the "Genetic Non-Discrimination Act" by outlining procedures for the handling of genetic research material (HB 1368).
- Amending the "Oklahoma Do-Not-Resuscitate Act" by inserting a hierarchy of persons, including family members, into the decision-making process of persons eligible to inform the attending physician that the incapacitated person would not have consented to the administration of CPR and that nothing in the act shall require any physician or health care provider to take any action contrary to reasonable medical standards (HB 1381).
- Continuing to promote the development of a statewide "Trauma System" (SB 290).
- Supporting the use of monies from Oklahoma's Tobacco settlement for public health care efforts and anti-smoking campaigns.

For further information, please contact OSMA's Director of Political Affairs, Kathy Musson at OSMA headquarters, 800/522-9452 or 405/843-9571.

## Satisfaction Survey: Early Returns Tallied

Responses to Dr. Noble L. Ballard's Letter to the Editor query in the January issue are beginning to arrive at the JOURNAL; early responses indicate that two-thirds of respondents are happy to be in medicine and glad to be physicians. All but one are self-employed, and gratified to serve humanity.

Eighty-eight percent are content with their income, even though a majority report their income is down in recent times. Most report that their workloads have increased, that their lives are changing, and that call problems are fairly stable. About half report a lack of patient respect, and half believe patient respect is the same or increased. Half of the respondents would encourage a child to go into medicine, and half would not.

Two-thirds of the answers received indicate there is a preservation of "medical school ideals," and a similar number believe that older physicians are doing okay. Private practice in a solo or small group format was definitely preferred. One respondent sent a detailed insurance proposal.

These early returns are too few for firm conclusions; Dr. Ballard plans further reports after more data is collected.

## Baker Receives National Award for Excellence in Cosmetic Surgery

Sterling S. Baker, MD, received the "Excellence in Cosmetic Surgery Award" from the American Academy of Cosmetic Surgery during the 15<sup>th</sup> annual scientific meeting of the association. In 1980, he developed and pioneered CO<sub>2</sub> laser blepharoplasty surgery, which uses a laser to remove excess skin and/or puffiness from the upper and lower eyelids.

Dr. Baker is a board-certified ophthalmologist in private practice in Oklahoma City, focusing on ophthalmic plastic and reconstructive surgery, and is also a clinical assistant professor in the Department of Ophthalmology at the University of Oklahoma College of Medicine.



## Diphtheria Vaccine Recalled by FDA

The FDA has announced a recall of Tripedia (DTaP) vaccine manufactured by Pasteur Merieux Connaught because of concerns that it is too weak to fully protect against diphtheria. The lot number being recalled is 0916490 and was distributed between February and June 1998.

Because the Oklahoma State Immunization Division has not had this lot number in inventory, none has been distributed to any county health departments or VFC providers. However, private physicians in Oklahoma may have purchased some of this vaccine from the manufacturer, which was distributed between February and June 1998.

The manufacturer will contact physicians who have purchased the vaccine with specific recommendations. According to Susan Mendus of the Oklahoma State Health Department, it is generally not necessary to re-vaccinate unless the child who received the recalled vaccine will travel outside the United States because the risk of diphtheria in the U.S. is minimal. Oklahoma has only had one case of diphtheria since 1974, and a total of four cases were reported in the entire United States in 1997.

## Former FDA Commissioner to Present at Public Lecture on Tobacco



David Kessler, MD, PhD, former commissioner of the U.S. Food and Drug Administration, will present a public lecture entitled "The Tobacco Wars" at the OU Health Sciences Center at 7 p.m. on Friday, April 9. Dr. Kessler will focus on the regulation of drugs, tobacco and chemicals, a process that entails judgements affecting many different constituencies with interests which are often conflicting. The presentation is being sponsored by the Oklahoma Scholar-Leadership Enrichment Program (OSLEP) and will be held in the auditorium of the

College of Health at 801 NE 13<sup>th</sup>, Oklahoma City. For more information about Dr. Kessler's presentation, contact the Oklahoma Center for Toxicology at 405/271-6593, ext. 47271.

## OSMA Joins Statewide Coalition to Assess End-of-Life Care

The Oklahoma State Medical Association (OSMA) is a member of a statewide coalition that has received a \$75,000 planning grant from the Robert Wood Johnson Foundation for the purpose of assessing current end-of-life care in Oklahoma, establishing public dialogue about the issue, and building alliances for policy change.

The coalition, Oklahoma Alliance for Better Care of the Dying (OkABCD), was formed in May 1998 by the Oklahoma Association for Healthcare Ethics Inc. Representing the OSMA in this group are Edward N. Brandt, Jr., MD, PhD, and Marie Bernard, MD, Chair of the Geriatric Subcommittee of the Council on Public and Mental Health.

OkABCD's project will collect data documenting end-of-life experiences of state residents. Information will be collected on issues such as hospice care and its rate of usage, pain management, and insurance coverage for hospice care. The project will hold focus group meetings, town hall meetings and conferences with healthcare providers and diverse public groups.

The project will culminate with a plan for implementing and evaluating change in end-of-life care in Oklahoma.

The Oklahoma coalition is one of 15 partnerships receiving grants under the new Robert Wood Johnson Foundation program entitled, "Community-State Partnerships to Improve End-of-Life Care."

The Robert Wood Johnson Foundation, based in Princeton, N.J., was founded in 1972 and is the nation's largest philanthropy devoted exclusively to health and health care.

# Letter to the Editor

TO THE EDITOR:

My 16-year-old daughter, Andrea, recently composed the following poem for a school assignment. She has been exposed to my clinical work in the field of child abuse all of her life. During FY98, 45 Oklahoma children died from child abuse. Perhaps this poem will inspire us all to secure the proper training,\* and to become involved as medical experts in order to recognize, intervene in, and eventually prevent child abuse deaths and serious injuries.

Robert W. Block, MD  
Chief Child Abuse Examiner, Oklahoma

\* 7.5 hours CME training in child maltreatment is available free through the Oklahoma Board of Child Abuse Examination. Call Ms. Trish Williams, 405/271-8858, for details.

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## **All I Wanted Was Love**

*All I wanted was for someone to be there.  
All I wanted was your attention.  
I knocked the bowl down  
For a reason.  
I wanted you to love me.  
I wanted you to take care of me.  
You claimed we were a family,  
But families love each other,  
Take care of each other  
And respect each other.  
You didn't have to hit me.  
You didn't have to throw me against a wall.  
Maybe I wouldn't be dead.  
You said you would protect me from the  
world,  
But you came home drunk  
And knocked me in the head.  
It only hurt for a while,  
But you killed me.  
The blanket of guilt lies upon you  
Now.  
You couldn't even protect me from yourself.  
The way you would scream at me,  
I hated you,  
But tried to love you.  
You hated me,  
But didn't try to love me.  
I am gone now  
And you swam yourself with  
Pity.  
You should have thought about this  
Before I was dead.  
A child, dead, because of you.  
The tears are flowing now  
But I can not feel a thing.  
You have scarred me  
One too many times  
And now we are separated  
Because of you.  
I am all alone.  
All I wanted was love.*

Andrea Block  
Tulsa

# Continuing Medical Education

## Listings from OSMA-Accredited Institutions

### Jane Phillips Medical Center

CONTACT: Ronda Riden, 918/331-1467

|  |   |
|--|---|
| March 4<br><i>Update on the<br/>rheumatology Patient</i><br>JPMC, 10 <sup>th</sup> Floor,<br>Classroom 3<br>Noon to 1 p.m.<br>1 CME Hour | March 11<br><i>Spasticity</i><br>JPMC, 10 <sup>th</sup> Floor,<br>Classroom 3<br>Noon to 1 p.m.<br>1 CME Hour |
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### OUHSC

#### Office of Continuing Medical Education

CONTACT: Letricia Harris, 405/ 271-2350

<http://research.ouhsc.edu/cme/homepage.htm>

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| March 4-5<br><i>Update in Neurology -<br/>1999</i><br>Presbyterian Hospital,<br>Rose Auditorium &<br>Childrens Hospital,<br>Nicholson Tower,<br>OKC<br>11 CME Hours | March 12-23<br><i>1999 Child Abuse<br/>Medical Examiner<br/>Training</i><br>Southern Hills<br>Marriott, Tulsa<br>10 CME Hours |
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| March 5-6<br><i>MW Gut Club</i><br>Waterford Hotel &<br>Cowboy Hall of<br>Fame, OKC<br>8 CME Hours | March 16<br><i>1999 PLICO Loss<br/>Prevention Seminars</i><br>Holiday Inn, Durant<br>2 CME Hours |
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| March 9<br><i>1999 PLICO Loss<br/>Prevention Seminars</i><br>Northwest Inn,<br>Woodward<br>2 CME Hours | March 23<br><i>1999 PLICO Loss<br/>Prevention Seminars</i><br>Holiday Inn, Enid<br>2 CME Hours |
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### Deaconess Hospital

CONTACT: Cyndi Nelson, 405/604-4979

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| March 15<br><i>Immunization Update</i><br>MOB-North<br>6:30 p.m.<br>1 CME Hour |
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### INTEGRIS Baptist

#### Medical Center

#### CONTACT:

Rikki Caraway

405/949-3284

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| March 5<br><i>Tumor Board</i><br>Bennett Room<br>7 a.m.<br>1 CME Hour |
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| March 8<br><i>Review of NSAIDs</i><br>Conf. Rooms C & D<br>7 a.m.<br>1 CME Hour |
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| March 12<br><i>Current Therapeutic<br/>Options in the<br/>Management of B-Cell<br/>Malignancies</i><br>Bennett Room<br>7 a.m.<br>1 CME Hour |
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| March 12<br><i>Midline-At the Top of<br/>the Hill with a Way to<br/>Go</i><br>Auditorium<br>8 a.m. - 12:30 p.m.<br>4 CME Hours |
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| March 19<br><i>Tumor Board</i><br>Bennett Room<br>7 a.m.<br>1 CME Hour |
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| March 23<br><i>Pharmacotherapy -<br/>Geriatric Series</i><br>Bennett Room<br>12:30 p.m.<br>1 CME Hour |
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| March 26<br><i>Tumor Board</i><br>Bennett Room<br>7 a.m.<br>1 CME Hour |
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### INTEGRIS Southwest Medical Center

CONTACT: Jonathan Stotler, 405/636-7087

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| March 2, 16<br><i>Prospective Breast<br/>Care Conference</i><br>Oncology<br>12:15 p.m.<br>1 CME Hour |
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| March 3<br><i>Review of NSAIDs</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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| March 4, 11, 18, 25<br><i>Cancer Conference</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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| March 10<br><i>Asthma Update 1999</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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| March 17<br><i>Allergic Rhinitis</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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| March 24<br><i>Pain Management</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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| March 31<br><i>Treatment Strategies<br/>for Improving<br/>Glycemic Control</i><br>Auditorium<br>12:15 p.m.<br>1 CME Hour |
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### ODMHSAS Institute for Mental Health Education and Training

CONTACT: Teresa Peden, 405/522-3839

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| March 5<br><i>New Visions of Recovery Based on the<br/>Empowerment Model</i><br>Norman<br>8:30 a.m. to 4:30 p.m.<br>6 CME Hours |
|---|

*For information about a listed course, call  
the appropriate contact.*

*For information regarding CME  
requirements or becoming an accredited  
provider, call Barbara Matthews, Director  
of Meeting Services and Development,  
405/843-9571.*

# Invitation from the Presidents

Dear OSMA Member:

The 93rd Annual Meeting of the Oklahoma State Medical Association (OSMA) is scheduled for April 15-18, 1999, at the Southern Hills Marriott in Tulsa. We invite you to be a part of this timely meeting which will focus on the theme "**Oklahoma Medicine-The Unbreakable Bond.**" We will take this opportunity to recognize the true foundation of quality medical care — the physician-patient relationship.

As you review this information, I know you will find several items of interest to you and your practice. Each day offers a variety of OSMA business meetings, medical education sessions, and social functions. Our meeting offers the following objectives: 1) To give healthcare professionals the opportunity to network and exchange ideas; 2) To update attendees on the trends, perspectives, and challenges of health care reform in Oklahoma, and 3) To demonstrate the importance of personal involvement in the political process in regard to issues facing Oklahoma physicians.

Please note some of the highlights of the meeting. Thursday evening offers a reception for "Women in Medicine." Members of the Congressional Delegation will be featured as the keynote speakers for the OSMA/OSMAA luncheon on Friday. Saturday will be devoted to several CME courses and forums provided by the OSMA and a number of specialty societies. Some 40 exhibitors will be on site to display their products and services. These vendors are an integral part of our meeting and it is an excellent way to find out about resources that can assist your practice. Saturday night is the traditional OSMA/OSMAA Presidents' Inaugural Dinner held at the Gilcrease Museum. I hope you will make plans to attend and support the incoming OSMA President, Boyd O. Whitlock, MD, and the incoming OSMAA President, Mrs. Cheryl Baker.

It has been a pleasure serving as your elected president for 1998-1999, and I invite you to join your colleagues by registering for the 1999 OSMA Annual Meeting.



*Mary Anne McCaffree*

Mary Anne McCaffree, MD, OSMA President



Dear OSMA Alliance Member:

You are invited to attend the Annual Meeting of the OSMA Alliance in Tulsa on April 15-18, 1999. Merrell Rogers, President-Elect of the Southern Medical Association Auxiliary has been invited to be our honored guest.

On Friday at 9:00 a.m. the Board will convene for a Pre-Convention Board Meeting. The luncheon keynote address on Friday, April 16 will be given by members of the Oklahoma Congressional Delegation. Saturday morning at 7:00 a.m. there will be a breakfast for all past state presidents and a breakfast meeting for the county presidents-elect to visit personally and share ideas with President-Elect Cheryl Baker.

At 8:00 a.m. Gordon Deckert, MD and his wife, Jane Chew Deckert, will offer a two hour joint session for the OSMA and the Alliance on Stress Management in the 21<sup>st</sup> Century. Immediately following at 10:00 a.m., the OSMAA House of Delegates will convene. Cheryl Baker will be installed as the 1999-2000 President of the OSMA Alliance by Susan Paddack, Secretary of the AMA Alliance.

Following the House of Delegates, Cheryl Baker will be presiding over the Post-Convention Board Meeting and Luncheon. I hope you will plan to attend the Inaugural Dinner on Saturday evening at the Gilcrease Museum and support the new OSMA Alliance President, Cheryl Baker and the new OSMA President, Boyd O. Whitlock, MD. Look for further details in the March issue of the Sooner Heartbeat and I hope to see you at the Southern Hills Marriott.

*Diane S. Cooke*

Diane Cooke, OSMAA President

## ✓ Education Seminars

**Thursday April 15, 1999:** *PLICO Loss Prevention Seminar* 2 hours of Category 1 CME credit  
6:00-8:00 pm

**Friday April 16, 1999:** *Surgical Association Loss Prevention Seminar* 2 hours of Category 1 CME credit  
1:00-4:00

**Saturday April 17, 1999:** *Stress Management in the 21st Century* 2 hours of Category 1 CME credit  
8:00 am - 10:00 am

Do physicians and spouses find change particularly stressful? What is the single best strategy for managing stress? Gordon Deckert, MD and Jane Chew Deckert, MS, will present a two hour program on Stress Management in the 21st Century.

*End of Life Quality of Care* 1 hour of Category 1 CME credit  
10:00 am - 11:00 am

One-hour training with regard to end-of-life and palliative care issues. It is designed to educate physicians on the essential clinical competencies in end-of-life care. Members of the OSMA Geriatrics Task Force which includes; Dr. Kevin Donovan, Dr. Allene Jackson, Dr. John Belzar, and Dr. Michele Ondersma, will be presenting this one hour program.

These activities have been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the Irwin Brown Office of Continuing Medical Education and the Oklahoma State Medical Association. The Irwin Brown Office of Continuing Medical Education is accredited by the ACCME to provide continuing medical education for physicians.

## ✓ Forums:

**Saturday, April 17, 1999 7:00-8:00 am**

### **Peer Review Coalition:**

An update on Legislative efforts in regards to HB 1443, the "Oklahoma Health Care Quality Improvement Act" (Peer Review).

### **Oklahoma Centralized Verification Organization:**

Informal session to discuss OCVO's plans to expand services throughout the state and be available to answer questions regarding the OCVO credentialing services.

### **Campaign for Health:**

An update on OSMA's Campaign for Health. Members of the Task Force will be available to discuss Health Initiatives for 1999 and beyond.



## Business Meetings

The Oklahoma State Medical Association House of Delegates, the policy-making body of the association, will meet on Friday, April 16, and Sunday, April 18, during the Annual Meeting. The House is made up of delegates from county medical societies and elected leaders. All OSMA members are invited and encouraged to participate in discussion of OSMA policies. *However, only delegates, or alternates seated as delegates, may vote in the house.* Grassroots resolutions have gone from the OSMA House to the AMA and on to Washington, DC, to shape national public policy.

Reference Committee meetings will convene Friday afternoon, April 16. Each committee is comprised of a small group of delegates and the meetings are an open forum to discuss the current issues brought before the House of Delegates. Any OSMA member may participate by testifying at these committee meetings. The committee then makes recommendations to the House regarding the business referred to it. Registrants are encouraged to attend the committee meetings and the House sessions to see firsthand how OSMA policies are developed.

# 93rd OSMA Annual Meeting

## ✓ AMA - Foundation Silent Auction

Make sure and visit the OSMA Alliance booths/tables to place your bids on wonderful and unique items. Your donation will benefit the American Medical Association Foundation. The auction will open on Friday morning and close at noon on Saturday, April 17, 1999.

## ✓ OSMA Councils/Committees:

### Friday, April 16 1999:

Rural Health Council  
Medical Student Section

7:00 am  
5:00 pm

### Saturday, April 17, 1999

Governmental Activities Council  
OMPAC General Membership Meeting

7:30 am  
1:00 pm

## ✓ Social Events

**"Women in Medicine" Reception** — On Thursday evening there will be a "Women in Medicine" reception hosted by the Tulsa County Medical Society, Oklahoma County Medical Society and the OSMA. Open to all annual meeting attendees.

**OSMA/Alliance Luncheon** — Members of the Oklahoma Congressional Delegation will be the keynote speakers at the OSMA Alliance luncheon on Friday, April 16th at Noon (tickets \$25.00).

**Presidents' Inaugural Reception & Banquet** — The Gilcrease Museum will be the location of this year's inaugural reception and banquet. The evening will begin with a reception honoring the outgoing and incoming presidents of the OSMA and the OSMA Alliance. Join us for a wonderful dinner and the joint installation of Boyd O. Whitlock, MD as OSMA President and Mrs. Cheryl Baker as OSMA Alliance President. (Transportation will be provided to and from the Gilcrease Museum.)

## ✓ Specialty Society Meetings

The following specialty societies will be holding meetings in conjunction with the OSMA Annual Meeting: The **Oklahoma Surgical Association**, the **Oklahoma State Orthopaedic Society**, and the **American College of Emergency Physicians**. Contact your specialty society for further specifics on the individual programs.

## ✓ Exhibitors/Sponsors

The exhibitors and sponsors play a vital role in contributing to the overall success of the Annual Meeting. Through their generous financial support, the OSMA is able to provide attendees with quality educational programs and enjoyable social functions. Make plans in your annual meeting schedule to visit with the exhibitors on Friday, April 16, 1999, between 8:00 am and 5:00 pm and Saturday, April 17, 1999, between 8:00 am and Noon. A listing of all exhibitors will be printed in the OSMA March Newsletter.

***OSMA & OMPAC will also have booths available for general information and to answer any questions you may have.***

## Important Information

## ✓ Meeting Attire

General sessions, educational programs, and other daytime activities — business attire, but dress comfortably. Presidents' Inaugural Banquet — black tie optional.

# 93rd OSMA Annual Meeting

## Tentative Meeting Schedule

*Unless otherwise indicated, all the following events will take place at the Southern Hills Marriott.*

### Thursday, April 15, 1999

- 10:00 am OSMA Executive Committee Meeting
- Noon OSMA Executive Committee/Board Luncheon
- 1:30 pm OSMA Board of Trustees Meeting
- 1:30 pm OSMA Registration Opens
- 5:00 pm "Women in Medicine" Reception
- 5:00 pm Federation Coordination Team — Open Forum with Jay A. Gregory, MD
- 5:00 pm Speakers Pre-Convention Meeting
- 6:00 pm PLICO Loss Prevention Seminar - 2 hours of Category 1

### Friday, April 16, 1999

- 6:00 am Hospitality
- 7:00 am OSMA/OSMAA Registration Opens
- 7:30 am Tulsa County Medical Society Caucus & Breakfast
- 7:30 am Oklahoma County Medical Society Caucus & Breakfast
- 7:30 am Rural County Medical Societies Caucus & Breakfast
- 7:30 am Credentialing for House of Delegates
- 8:00 am OSMA Exhibits & AMA-Foundation Silent Auction Open
- 8:30 am OSMA House of Delegates Opening Session
- 10:00 am *Alliance Pre-Convention Board Meeting*
- Noon OSMA/Alliance Luncheon — Oklahoma Congressional Delegation
- 1:00 pm *Oklahoma Surgical Association Loss Prevention Program - 2 hours Category 1*
- 2:00 pm OSMA Reference Committee I
- 2:30 pm OSMA Reference Committee II
- 3:00 pm OSMA Reference Committee III
- 5:00 pm OSMA Medical Student Section Meeting
- 6:00 pm *Oklahoma Surgical Association Party*
- 6:00 pm *Medical Alumni Association, University of Oklahoma, Reception*
- 7:00 pm *Medical Alumni Association, University of Oklahoma, Awards Dinner*
- 9:00 pm *Medical Alumni Association, University of Oklahoma, Class Reunions*

### Saturday, April 17, 1999

- 6:00 am Hospitality
- 7:00 am OSMA/OSMAA Registration Opens
- 7:00 am County Society Presidents', Specialty Society Presidents, and OSMA Past Presidents Breakfast
- 7:00 am OSMA Breakfast Forums
- 7:00 am Governmental Activities Council Meeting
- 7:00 am *Alliance State Past Presidents' Breakfast*
- 7:00 am *Alliance County Society Presidents' and County Society Presidents'-Elect Breakfast*

### Saturday, April 17, 1999

- 8:00 am Visit OSMA Exhibits & AMA-Foundation Silent Auction
- 8:00 am OSMA Joint Sponsored CME Sessions - 3 hours, Category 1
- 8:30 am *Oklahoma Surgical Association Council Meeting*
- 10:00 am *Alliance House of Delegates*
- 9:00 am *Oklahoma Society of Anesthesiologists Lectures & Meeting*
- 10:00 am *Medical Alumni Association, University of Oklahoma, Board Meeting*
- 11:00 am *Speakers Meeting*
- 11:00 am *Physical Medicine and Rehabilitation Society Luncheon & Meeting*
- 11:00 am *Oklahoma State Orthopaedic Society Luncheon & Meeting*
- Noon OSMAA AMA Foundation Silent Auction closes
- Noon OSMA Exhibits Close
- Noon *Oklahoma Surgical Association Luncheon & Meeting*
- Noon OMPAC Board Luncheon Meeting
- 1:00 pm OMPAC Annual Membership Meeting
- 1:00 pm *Alliance Post Convention Board Meeting*
- 6:00 pm OSMA/OSMAA Presidents' Reception\*
- 7:00 pm OSMA/OSMAA Presidents' Inaugural Banquet\*

### Sunday, April 18, 1999

- 6:00 am Hospitality
- 7:00 am OSMA Registration Opens
- 7:00 am Oklahoma County Medical Society Caucus & Breakfast
- 7:00 am Rural County Medical Societies Caucus & Breakfast
- 7:00 am Tulsa County Medical Society Caucus & Breakfast
- 7:30 am Credentialing for House of Delegates
- 7:30 am Voting Room Opens
- 9:00 am OSMA House of Delegates Closing Session
- Noon New OSMA Officers, Trustees, and AMA Delegates Lunch\*\*
- 1:30 pm AMA Delegation Caucus\*\*

*\*Location – Gilcrease Museum, 1400 Gilcrease Museum Road, 918/596-2700*

*\*\*Beginning time subject to the ending of the House of Delegates Closing Session.*

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## DEATHS

### Joseph N. Mitchell, MD 1910 - 1998

Joseph N. Mitchell, MD died Dec. 23, 1998. Dr. Mitchell was born on Sept. 25, 1910, in Dallas, Texas. He completed his medical degree at Tulane Medical School in New Orleans in 1935. During World War II, Mitchell served 54 months of active duty in the Army, including 31 months overseas in India and Burma, achieving the rank of Major and receiving a Bronze Star. Mitchell was one of the original physicians and founders of Comanche County Memorial Hospital; he served as president of the Comanche County Medical Association and had been a life member of the Oklahoma State Medical Association since 1984.

### Thomas Edward Rhea, MD 1920 - 1999

Thomas Edward Rhea, MD, died Jan. 2, 1999. Dr. Rhea was born Jan. 6, 1920, in Lexington, Miss., and completed his medical degree at the University of Tennessee in 1945. During medical school, Rhea was commissioned in the Army's medical corps, rising to the rank of Captain. His 42 months of active duty during World War II included service in Okinawa shortly after the war ended in the Pacific. During his medical career, Rhea was secretary-treasurer of the McCurtain County Medical Society and was also a trustee of the Oklahoma State Medical Association.

### H. Ben Yagol, MD 1910 - 1999

H. Ben Yagol, MD, died Jan. 19, 1999. Dr. Yagol was born Aug. 6, 1910, in New York City. He attended Emory University in Atlanta where he received his medical degree in 1934. Yagol's professional affiliations included membership in the College of Radiology, Radiological Society of North America, Pontotoc County Medical Society, Valley View Hospital Staff, the American Medical Association, charter member of the Oklahoma X-Ray Society, and life member of the Oklahoma State Medical Association.

## IN MEMORIAM

### 1998

|                                   |              |
|-----------------------------------|--------------|
| Robert T. "Tom" Cronk, MD .....   | April 15     |
| Jack Paul Enos, MD .....          | April 19     |
| Paul Arthur Barnett, MD .....     | April 28     |
| Allen B. Eddington, MD .....      | May 20       |
| David C. Ramsey, MD .....         | May 22       |
| William H. Reiff, MD, FACS .....  | May 25       |
| Jerry L. Puls, MD .....           | June 5       |
| James M. Behrman, MD .....        | June 5       |
| Charles N. Talley, MD .....       | June 14      |
| Thomas C. Points, MD, PhD .....   | June 15      |
| Charles M. Cameron, Jr., MD ..... | June 22      |
| Philip G. Tullius, MD .....       | July 4       |
| Louis H. Charney, MD .....        | July 8       |
| Ralph L. Walker, DO .....         | July 11      |
| Brook S. Bowles, MD .....         | July 20      |
| Edwin R. Shapard, MD .....        | July 28      |
| Paul L. Masters, MD .....         | August 6     |
| Douglas D. Leatherman, MD .....   | August 21    |
| Richard E. Carpenter, MD .....    | August 30    |
| Henry J. Freede, MD .....         | September 9  |
| Chester K. Mengel, MD .....       | September 14 |
| Leaford Thornbrough, MD .....     | September 27 |
| Sumner Y. Andelman, MD .....      | October 6    |
| Eric B. Meador, MD .....          | October 10   |
| Vance A. Bradford, MD .....       | October 23   |
| Joseph S. Raff, MD .....          | November 12  |
| Herbert J. Forrest, MD .....      | November 14  |
| Joseph N. Mitchell, MD .....      | December 23  |

### 1999

|                              |            |
|------------------------------|------------|
| Thomas Edward Rhea, MD ..... | January 2  |
| H. Ben Yagol, MD .....       | January 19 |

## CLASSIFIEDS

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. *Payment must accompany all submissions.* Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 9th of the month prior to the month of issue (e.g., Dec. 9 for the Jan. issue).

### PRIMARY CARE PHYSICIAN

Full-time faculty positions in the Department of Internal Medicine, The University of Oklahoma College of Medicine-Tulsa, to begin July 1, 1999. Responsibilities include teaching housestaff and students, and clinical patient care. Interest in ambulatory research is desirable. Applicants should be Board-certified or Board-eligible in internal medicine and have demonstrated an interest in academic medicine. Reply with CV: Michael Weisz, MD, University of Oklahoma, 2808 S. Sheridan, Tulsa, OK 74129. Applications will be reviewed beginning March 1, 1999. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer.

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## April in Paris

by "K" Caldwell  
*OSMAA Convention Chair*

Okay, so it's not Paris. It is Tulsa, Oklahoma. But "love is in the air and Spring is everywhere" when you attend the 93rd OSMA Annual Meeting at the Southern Hills Marriott, April 15-18, 1999. Mother Nature is on the committee and will dress Tulsa in its finest Spring garb. You will be able to see for yourself how Oklahomans serve up love and dedication to medical communities across the state.

The Alliance House of Delegates meeting at 9:30 a.m. Saturday morning will be one of the best ways to see love in action as you will hear how members provide community support for schools, arts, medical education and promotion, fund raising, self interest and support groups, social needs, legislative awareness and action, help for the young, old and the in-betweens, exercise and sports programs — just to name a few.

You are also welcome to share in a "stress management" program before the House of Delegates meeting.

Don't forget to attend the silent auction and bid on very creative theme baskets provided by Alliances. Money raised from this event will bring in thousands of dollars for the American Medical Foundation (formerly AMA-ERF) which provides funds for medical education and research. You will even be able to designate which medical school receives your check.

On Saturday evening, don't miss the OSMA-OSMAA President's Reception and Inaugural Banquet at Gilcrease Museum. It is one of the finest art museums in the nation, and it is an opportunity to view an art collection that no one should miss on a visit to Tulsa. Believe me when I tell you it is up to Paris standards!

In your spare time, "April in Tulsa" offers fine dining, sports events, shopping, an open designer's showcase home, roses in bloom at the Garden Center, river runs (or walks...suit yourself), etc.

You will be receiving detailed information concerning the convention. REGISTER and enjoy love in the air and Spring everywhere in Tulsa, April 15-18, 1999.

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"...see for yourself  
how Oklahomans  
serve up love and  
dedication to  
medical  
communities across  
the state."

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# THE LAST WORD

## **OSMA Participating in Tobacco-Free Oklahoma Coalition**

The Oklahoma State Medical Association is one of a number of health care organizations that have joined together to form the Tobacco-Free Oklahoma Coalition. Other members of the Coalition include the American Cancer Society, the American Heart Association, the American Lung Association, the Oklahoma Dental Association and the Oklahoma Public Health Association.

The Coalition is encouraging the State of Oklahoma to institute a wide-ranging plan to cut tobacco use, including establishing community-based tobacco prevention programs in all 77 Oklahoma counties; providing tobacco-prevention curricula in all elementary and high schools; and treating tobacco dependence through the health care system. Other recommendations include providing sustained, effective counter-advertising media campaigns; severely limiting children's access to tobacco; reducing exposure to second-hand smoke in workplaces and other public areas; and teaching parents and caregivers about the dangers of exposing children to tobacco smoke.

## **Glaucoma 2001 Offered by American Academy of Ophthalmology**

Glaucoma 2001, a public service effort of the American Academy of Ophthalmology, is designed to assist individuals who might not otherwise have access to an ophthalmologist for medical eye care. The public can call the Glaucoma 2001 Helpline at 800/391-EYES (3937) to learn about glaucoma risk factors. If a caller is at moderate to high risk for glaucoma, has been without medical eye care for at least two years, is a U.S. citizen or legal resident and does not have a prepaid or government health plan, that individual will be referred to a participating ophthalmologist in the area for an exam and treatment for glaucoma (if necessary).

## **Chiou Chosen as Citizen of the Year**

Helen Chiou, MD, was recently named Citizen of the Year for 1998 by the Woodward Chamber of Commerce in recognition of her professional achievements and volunteer efforts in the community. Dr. Chiou has been in practice in the Woodward area since 1977.

## **National Alcohol Screening Day is Scheduled for April**

April 8 has been chosen as the date for the first National Alcohol Screening Day. The Oklahoma State Medical Association is cosponsoring four sites for this first-time event: NAIC-Center for Oklahoma Alcohol and Drug Services (405/321-0022); Phoenix Recovery Institute (405/525-0036); Referral Center for Alcohol and Drug Services (405/525-2525); and A Chance to Change Foundation (405/840-9000).

The screening day is cosponsored by the American Medical Association (AMA), and is a collaboration of the National Mental Illness Screening Project and National Institute of Alcohol Abuse and Alcoholism. The program will address the range of drinking behaviors from risky drinking to alcohol dependence, and the Alcohol Use Disorders Identification Test will be used as a screening instrument. For information, contact the National Alcohol Screening Day at 781/239-0071.

## **OSMA Annual Meeting in Tulsa**

Unbreakable Bond is the theme of this year's annual meeting taking place in Tulsa at the Southern Hills Marriott April 15 to 18, 1999. Timothy Flaherty, MD, AMA secretary-treasurer, will address delegates at the opening session and the Presidents' Inaugural Dinner at the Gilcrease Museum.

Members of the Congressional Delegation will speak at the OSMA/OSMA Alliance luncheon on Friday, April 17. Call the OSMA, 800/522-9452 or 405/842-9571 for registration information.

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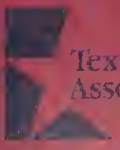


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OKLAHOMA STATE MEDICAL ASSOCIATION  
APRIL 1999



**Boyd O. Whitlock, MD**

OSMA President 1999-2000

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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

APRIL 1999

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## Oklahoma City Explosion

Four years ago this month, a large bomb exploded under the north side of the Alfred P. Murrah Federal Building in the heart of Oklahoma City. Many scores of innocents, including children, were killed in the blast, and several hundred citizens suffered serious injuries. In a dreadful, unexpected instant Oklahoma and the whole world were reminded that even in the heartland of civilization our lives are forfeit to the hidden criminal assassin.

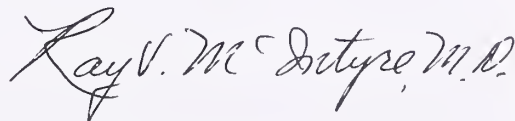
The massive destruction and epidemic of casualties placed a heavy burden on medical facilities, and on the rescuers and the forensic medical examiners. Despite the overwhelming nature of the event, the medics promptly cared for the wounded. The Oklahoma City firefighters led the rescue and recovery, with aid from volunteers from across the nation. The forensic medical examiners cared for the fatalities and their grieving loved ones with great sensitivity and attention to detail. Amid calamitous catastrophe, the nobility of human compassion and resilience was well-demonstrated by the people of Oklahoma.

To commemorate the loss of life and to lift up the memory of the courageous endeavors of the rescuers and survivors, this issue of the *Journal* contains a special collection of articles on the aftereffects of the tragic event. In the hope that sharing the information learned with the medical community will be of value for the future, we have brought these articles together to be published on the fourth anniversary of the bombing.

This assemblage of articles does much more than remind us of the fearful uncertainties and the injury of the exploding bomb. They also refresh our emotional memories of the coming together, the outpouring of compassion and love, and the courageous—heroic—labors and faith of those helping the victims.

These articles chronicle the results of studies done to determine the effects of a catastrophic criminal act. They clearly record the significant negative effect on the youth of Oklahoma by the repeated reiteration of TV bombing news. They also record the definite positive effect of a personal religious faith on the rescuing firefighters. The authors discuss long term effects on physical and mental health, and they register adaption difficulties. The grim necessities of the forensic process are instructively outlined.

While these manuscripts are couched in the prim language of science, the poignancy of a titanic human disaster glows through the passages. The editors hope the knowledge here gathered can be a small monument to those whose lives were so suddenly lost four years ago.



Ray V. McIntyre, MD  
Editor-in-Chief

---

"The editors  
hope the  
knowledge here  
gathered can  
be a small  
monument to  
those whose  
lives were so  
suddenly lost  
four years ago."

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# PRESIDENTS' PAGES

## Farewell Message

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"Your association  
has strong  
leadership."

---

**I**t started as a normal Wednesday, but it turned into the worst day in Oklahoma history. The Murrah Federal Building, and the surrounding churches and other facilities destroyed by the bombing on April 19, 1995, have left a permanent scar on the face of the Oklahoma City landscape and an emotional hole in the hearts of its citizens.



The scores of individuals affected by this event are chronicled in the seven articles of this issue. Personal contact with two of the victims, a daughter's high school classmate and a neighbor (a lawyer who worked at the Federal Building) indicate how this event impacted individuals lives.

In our neighborhood park there is a tree planted in the lawyer's memory, a tree I pass daily during my morning exercise. The father of my daughter's friend has become one of the spokespersons for the Memorial efforts. The efforts of many to reach out and help both during the acute crisis and the chronic rebuilding time strikes a new chord.

Since this community came together during the initial phase, can the energy of this compassion be channeled to improve relations with one another during the rest of the recovery phase? Is it possible that those strangers across the world who reached out to us in Oklahoma at this time of crisis could also come together to solve those seemingly unsolvable issues of terror, fear, and hateful crimes? Perhaps this is the unmet challenge: to address these fears and terrorism. The authors in this issue are to be congratulated for bringing this information forward.

Hail and farewell! These are familiar words, used at commencement exercises to welcome some incoming first-year residents and to signal the completion of the years of residency for others. They are appropriate for the changes that will occur at the OSMA this month, the begin-

ning of a new phase of leadership for some and the end for others. This is a time to recognize and thank the staff for their efforts.

Your association has strong leadership. Brian Foy, executive director, has developed a robust group of talented individuals. Kathy Musson has continued to provide the support needed as associate executive director, working with Lydia Shirley and state lobbyist Lynne White on legislative issues as well as the association's challenges. Marisa New has added new dimensions to the Council on Medical Services and Public and Mental Health with her expertise in public health policy. Our new public relations leader is Brenda Hays.

Barbara Matthews continues to juggle her many duties as support for meeting services, staff for the Board of Trustees and AMA Delegation, and support for the Council on Continuing Medical Education. She has taken good care of this president's schedule. Marilyn Fick provides support for the executive director as well as for the OSMA Alliance. Judy Lake takes care of the OMPAC and manages the office.

Shirley Burnett continues to keep account of the financial matters for the association. Michele Smith handles the Council on Member Services and the OSMA Annual Meeting. Sue Graves works with Marisa New and the Council on Public and Mental Health. Kaye Boroughs handles membership records. Rhonda Matthews assists the Council on Public Relations. Receptionists Heather Begay and Sherry Burrows are the friendly voices that greet each one on the phone. Jason Ziesch has supported the Doctor of the Day program. The OSMA is grateful for all of the efforts of this team.

The efforts of our physician leadership are also recognized. Dr. Boyd Whitlock has prepared for his role as president, serving as chair of the Personnel & Finance Committee and member of the Executive Committee. His kindness and compassion are just two of his many attributes. Dr. David Russell has performed admirably as chair of the Board of Trustees. Dr.

## Moving Forward

On this occasion of my first message to you, I would like to comment on our successful past year. First and most important, I want to thank and congratulate Dr. Mary Anne McCaffree on a job well done.



Our organization is moving forward in all areas. I would also like to thank Mr. Brian Foy and his staff and all our councils and committees for the work they have done in leading our Association through a most productive period.

A word about the future...the Council on Long Range Planning & Development, under the guidance of Doctors McCaffree and Selby, has set our goals for the next few years. This is actually a "parallel plan" that will be regularly reviewed to be sure we are always moving forward and that

each decision we are making is in the best interest of physicians and their patients. I will be discussing these individual goals in future articles.

At this point I want to ask all of you to help our Association meet these goals. If you have any suggestions as to how we should proceed and if you would like to work in a particular area or serve on a specific council or committee, please let us know. If each physician in Oklahoma will give just a little of their time, we will be able to reach these goals.

Thank you for the opportunity to work with you in the coming year. Let's make this coming year even more successful than the last.

*Boyd O. Whitlock MD.*

Boyd O. Whitlock, MD  
OSMA President, 1999-2000

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"If each physician in Oklahoma will give just a little of their time, we will be able to reach these goals."

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## McCaffree continued

David Selby, past president, has been active on the AMPAC Board. Dr. Bob Weedn has worked tirelessly with the Campaign for Health Task Force. Dr. Carol Imes has continued to provide leadership as treasurer. Recognized for their efforts on the Executive Committee are Drs. Bruce Storms, Wallace Hosier, and John Bozalis. Dr. Ray McIntyre's editorial expertise is greatly appreciated.

The PLICO Board has provided important support and made significant changes in response to the membership's requests. In addition, PLICO supported the development of the OCVO. This year the OCVO Board had the expertise of Drs. Chris Carey (chair), Rosemary Bellino, Barbara Hastings, Kurt Frantz, Steve Mueller, Frank Phelps, Gary Paddock, Brian Foy and your President.

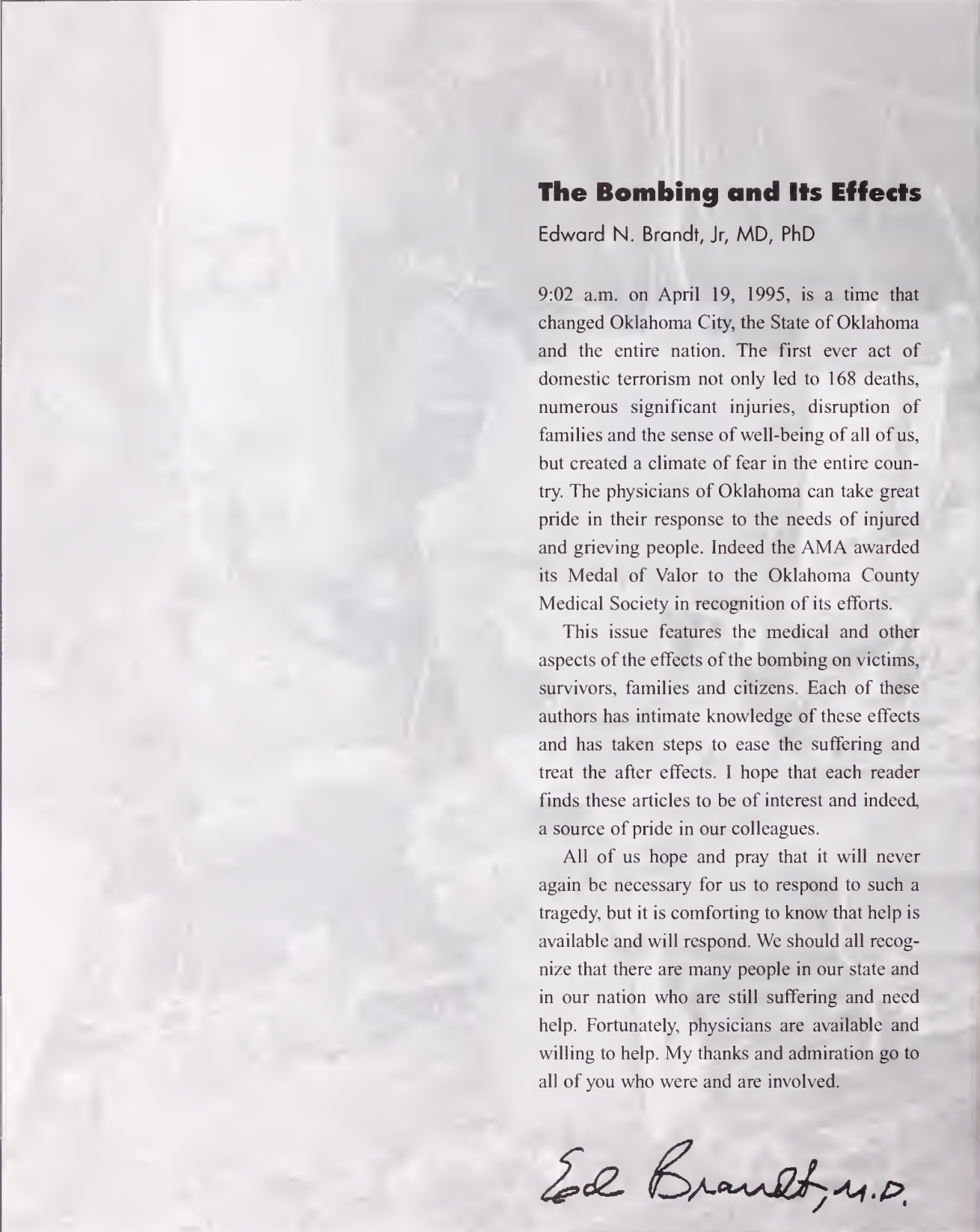
Director Michele Seba and Mona Wright are recognized for their outstanding efforts in the transition of the OCVO. Linda Scoggins, legal

counsel, has provided important assistance during this year. Council/Committee chairs were active, and the help of Drs. Robert Mahaffey, Jack Beller, Richard Boatsman, Michael Boyer, Ed Brandt, Kautilya Mehta, James Gormley, Roger Sheldon, William Barnhardt, Mark Johnson, Bruce Storms, Gary Strebel, Harrold Thiessen, William Coleman, David Selby, Tim Walker and Andy Gin are appreciated.

The hundreds of volunteer hours provided by the members of these councils and committees were essential support for your association. Thanks for your efforts. Hail to the new leaders, and farewell.

*Mary Anne McCaffree*

Mary Anne McCaffree, MD  
OSMA President, 1998-99



## **The Bombing and Its Effects**

Edward N. Brandt, Jr, MD, PhD

9:02 a.m. on April 19, 1995, is a time that changed Oklahoma City, the State of Oklahoma and the entire nation. The first ever act of domestic terrorism not only led to 168 deaths, numerous significant injuries, disruption of families and the sense of well-being of all of us, but created a climate of fear in the entire country. The physicians of Oklahoma can take great pride in their response to the needs of injured and grieving people. Indeed the AMA awarded its Medal of Valor to the Oklahoma County Medical Society in recognition of its efforts.

This issue features the medical and other aspects of the effects of the bombing on victims, survivors, families and citizens. Each of these authors has intimate knowledge of these effects and has taken steps to ease the suffering and treat the after effects. I hope that each reader finds these articles to be of interest and indeed, a source of pride in our colleagues.

All of us hope and pray that it will never again be necessary for us to respond to such a tragedy, but it is comforting to know that help is available and will respond. We should all recognize that there are many people in our state and in our nation who are still suffering and need help. Fortunately, physicians are available and willing to help. My thanks and admiration go to all of you who were and are involved.

*Ed Brandt, M.D.*

*Photo courtesy of the Oklahoma Air National Guard*

## The Role of the Medical Examiner in Mass Casualty Situations with Special Reference to the Alfred P. Murrah Building Bombing

Fred B. Jordan, MD

**Objective:** To describe the events that shaped the investigation by the Oklahoma Office of the Chief Medical Examiner with regard to the terrorist bombing of the Alfred P. Murrah Federal Building in Oklahoma City in 1995 and to provide lessons learned for reinforcement and future planning.

**Study Population:** All persons known to have been killed by the blast.

**Methods:** Standard forensic techniques with regard to crime scene investigation, documentation, body identification and cause of death determinations were followed.

**Main Outcome Measures:** Fatality injury and related evidence documentation.

**Results:** A total of 168 people died principally from secondary and tertiary injuries caused by projectiles, victim displacement, and crushing. Emphasis is placed on the methods of operation required to find, remove, identify, and determine cause of death in these individuals. Simultaneously, evidence must be identified and preserved in a homicide investigation of this type. Close cooperation must exist among multiple varied agencies and disciplines to accomplish the task and to prepare for subsequent analysis and courtroom testimony required by the criminal justice system.

**Conclusions:** Terrorism, both foreign and domestic, is a current fact and will be a problem in many forms in the 21st century. No one is immune. The key to success is to plan ahead and be aware of available resources. Preplanning for short comings and difficult issues, and most importantly, relying on team work will allow future participants to successfully meet and complete the challenge.

The investigation developed detailed injury data and mechanisms that were available for subsequent judicial proceedings and for in-depth epidemiological studies spearheaded by the Injury Prevention Service of the Oklahoma State Department of Health.

The experience of the Office of the Chief Medical Examiner, State of Oklahoma, following the domestic terrorist bombing of the Alfred P. Murrah Federal Building in Oklahoma City on April 19, 1995, not only afforded us a tragic opportunity to serve our community and the criminal justice system, but also the opportunity to carry the message of our successes and failures to other medicolegal jurisdictions in the United States and Canada.

Hardly a day passes when the popular press does not report a kidnapping, skyjacking, attempted assassination, or bombing in some part of the world. Terrorism is an act designed to generate fear, intimidate or coerce, affect government conduct or policy, and even perhaps punish a specific target as happened to us in Oklahoma City. There has been a 400 percent increase in terrorist bombing and attempts in the United States in the decade since 1984.<sup>1</sup> A *Newsweek* poll in 1997 indicated that 32 percent of those questioned believed that the greatest threat to world peace in the rapidly approaching 21st Century would be terrorism.<sup>2</sup> We have experienced physical terror and must actively plan for the biological and chemical assaults that unfortunately seem inevitable.

Direct correspondence to: Fred B. Jordan, MD, 901 N. Stonewall, Oklahoma City, Okla. 73117.

### **Alfred P. Murrah Federal Building Bombing**

The Alfred P. Murrah Federal Building was a nine story facility in Oklahoma City comprising 15 federal and three non-federal businesses and housing during normal working hours more than 500 people. At the time of the explosion, the first call to the Office of the Chief Medical Examiner from the Oklahoma City Police Department estimated in excess of 700 potential fatalities including employees and visitors to the building. The blast was the result of the explosion of approximately 4,000 pounds of ammonium nitrate fertilizer soaked in fuel oil and concealed in a 24-foot Ryder rental truck parked on the north side of the building just below the child day care center. The explosion caused universal physical damage to the structure, gross displacement of the first and second floors, and subsequent slightly eccentric pancaking of floors three through nine. Killed were 168 innocent Oklahomans, and nearly 800 people suffered injury.

The explosion produced a blast or shock wave with positive pressure velocities probably approaching 8,000 meters per second and a subsequent longer negative phase creating a significant localized under pressure. The force of the shock wave dropped off rapidly from the center of the explosion, but the air compressed and displaced by that wave produced a dramatic and destructive blast wind which, along with the building collapse, was responsible for virtually all the lethal trauma documented by the Office of the Chief Medical Examiner.

Bomb blast trauma can readily be divided into five general categories. Primary injury may be due to the blast or shock wave. This frequently appears as "blast lung" with major structural destruction and intraparenchymal hemorrhage resulting from spalling or brisance. The latter is the result of the wave passing over the interface between media of different densities. This is often complicated by a phenomenon known as implosion, the initial contraction of an air bubble followed by over-expansion as well as by sheer forces of inertia. "Blast lung" was not a finding in our fatalities, as a shock wave loses its pressure and velocity exponentially with distance from the site of the explosion itself. The Ryder truck was on the street while our victims were either within buildings or in one case in a near by parking lot.

Secondary injuries caused by flying projectiles and debris and tertiary injuries caused by victim displacement complicated by subsequent crushing were the principle mechanisms of the massive trauma that we found in the victims.

Burns, a fourth category, was important in only one of our cases, that of a lady apparently in the parking lot east of the Athenian restaurant at the time of the blast and consequent ignition of the vehicles in that lot. The fifth category, post-traumatic shock or stress disorder, was, and continues to be, an important clinical element of this act of domestic terrorism.

### **Role of the Office of the Chief Medical Examiner**

The medical objectives of a terrorist event are of necessity concerned not only with the evacuation and salvage of the living, but also the ethical treatment of the dead and the caring for friends, relatives, and caretakers. The forensic pathologist/medical examiner team has primary responsibility for search and body recovery, evidence identification and preservation, victim identification, determination of cause and manner of death, care of family and friends of the deceased, and care of personnel under his/her supervision and responsibility.

Principle ongoing sites of activity during the acute phase of the disaster included the Murrah building scene itself, the Central Division in Oklahoma City of the Office of the Chief Medical Examiner, the debris sifting site at the Oklahoma County Sheriff's Training Facility, and the Family Assistance Center at the First Christian Church, a site approximately 32 blocks north of the Murrah building.

### **Search and Recovery at the Scene**

As is the case with most medicolegal operations, not only are absolute numbers of personnel limited, but in addition to any emergency situation, the other daily activities of the agency must proceed forward. Thus the identification of resources and the implementation of teamwork among various units of government must be coordinated rapidly and require extensive pre-planning to be successful. Any initial activities at the scene will revolve around local fire, emergency medical, and police resources. In 1989 as part of the FEMA Federal Emergency Response Plan, Congress approved the development of 25 Urban Search and Rescue teams (US&R) to be organized throughout the United States. These teams are funded by FEMA and 11 were activated at the time of our bombing through the Oklahoma Department of Civil Emergency Management following a "state of emergency" ordered by Governor Frank Keating at 9:45 a.m. on the morning of the blast. FEMA immediately put US&R task forces from Phoenix, Arizona.

and Sacramento, California, on alert, and at 10:55 in the morning, activated them for immediate deployment to Oklahoma City. Both the Phoenix and Sacramento US&R task forces were in Oklahoma City before midnight of April 19th and were of inestimable assistance to us during the first 17 days of the acute phase of this operation. Other teams that participated in search and rescue were from New York City; Montgomery County, Maryland; Fairfax County, Virginia; Virginia Beach, Virginia; Metro-Dade County, Florida; Los Angeles County, Orange County, Sacramento, and Menlo Park, California; and a Puget Sound team from the state of Washington. These teams numbering from 50 to 70 personnel and arriving with 35,000 pounds of equipment were self-sufficient for three days, after which they were supported by our community. The majority of these teams are firefighters, but they are supported by physicians, nurses, veterinarians, engineers, and canines and their handlers.

Because it was rapidly apparent that the bombing site was a crime scene, numerous personnel as well as a large contingent from the Federal Bureau of Investigation worked hand-in-hand with us as we carried out our statutory responsibilities. In Oklahoma, joint jurisdiction exists between the police and the Office of the Chief Medical Examiner and, although a federal scene, to the benefit of the investigation cooperation between myriad agencies was essentially flawless.

Individuals from many walks of life added their special expertise to the successful operation of this evacuation and investigation. This included pathologists, radiologists, anthropologists, dentists, students and residents from the University of Oklahoma Health Sciences Center, laboratory and radiologic technicians, National Guard, and people from other jurisdictions outside of Oklahoma who are part of Disaster Mortuary teams (D-MORT) and the National Disaster Medical System (NDMS), Office of Emergency Preparedness, US Public Health Service. From NDMS, we received expertise with regard to ordering and tracking the huge volume of supplies necessary to carry out our operation. An important fact perhaps lost in the enormity of this situation was that FEMA was eventually responsible for the vast majority of expenses incurred by the agency.

Architects worked hand-in-hand with our full-time and volunteer personnel to interpret blue prints of the building and assist and guide search and rescue teams to the now virtually unrecognizable sites of highest personnel concentration within the building in an ordinary work day.

Engineers were instrumental in many areas, not the least of which was to keep an ongoing electronic eye on the building to alert rescuers to evacuate when the vagaries of Oklahoma's weather made continued operation unsafe.

A critical part of the search and recovery operation was the development of a temporary morgue including refrigerated trucks. This allowed orderly processing of bodies which could be transferred from the scene to the Central Division office as space and personnel became available.

### **Office of the Chief Medical Examiner, Central Division**

Because of our control of activities at the scene, the responsibilities of identification, evidence collection, and determination of cause of death could proceed in an orderly fashion. Seven stations existed at the OCME. First was the Reception Area, where a "tracker" — usually a volunteer from the Oklahoma State Funeral Director's Association — was assigned to remain with the body at all times and was in control of the developing file and all paperwork added to it. The personnel of the Reception Area maintained close contact with medical examiner personnel at the scene. Second was the Examination Station where pathology assistants, a pathologist, a clerical person, and an explosive expert from either the ATF or the FBI used shared expertise to develop any evidence or identify dangerous material that was within the transport body bag or the outer surfaces of the body itself. At this time, all clothing and jewelry were documented, often by photography, and all obvious marks, blemishes, physical characteristics, and obvious wounds were documented by the forensic pathologist. Where possible, toxicology, serology and specifically DNA specimens were obtained on all victims at this time.

Station Three involved fingerprinting, palm printing, toe printing, and sometimes total foot printing by a team comprised of experts from the Oklahoma City Police Department and the FBI. At this station also total body photographs were made by police photographers. Complete radiologic studies, numbering thousands of films for the total operation, were carried out at Station Four by volunteer radiologic technicians from throughout the region, and complete dental charting and continued evidence retrieval from within the oropharynx was carried out at Station Five under the supervision of forensic odontologists from the University of Oklahoma College of Dentistry.



Photo courtesy of the Oklahoma City Fire Department.

**Table 1. Oklahoma City Bomb Victims  
Means of Identification**

|  |    |
|--|----|
| Dental and fingerprints                    | 77 |
| Dental only                                | 44 |
| Fingerprints only                          | 25 |
| Radiology                                  | 6  |
| Visual - hospital                          | 4  |
| Polmprint                                  | 4  |
| DNA  | 3  |
| Footprint                                  | 1  |
| Toeprint                                   | 1  |
| Dental, fingerprints & DNA                 | 1  |
| Vital statistics, marks, scar & photograph | 1  |
| Polmprint & dental                         | 1  |

Because of the extreme destruction of the victims, a formal autopsy as such was not carried out in each case. Station Six was, however, the Autopsy Station and the area in which shrapnel and other pieces of evidence were removed as judged necessary by the examining pathologist, radiologist, and member of a federal bomb explosive team.

A principal role of this agency was identification. This involved the collection of massive amounts of antemortem data through interviews conducted by many people, often Oklahoma

funeral directors, and entry of that data into a computer. Subsequent data developed through the examination of the victims also was computerized and we depended heavily on CAPMI-4, a computer assisted postmortem identification system available at that time through the Armed Forces Institute of Pathology in Washington, D.C. Since our experience, other such sophisticated systems have been and continue to be developed. Table 1 summarizes our identification procedures. The smallest of the children were identified either by a comparison of latent prints recovered by teams of police who went to the homes of missing children or in some cases by DNA comparisons carried out by the Oklahoma State Bureau of Investigation laboratory.

Dr. Hans Selye, many years ago, characterized three distinct phases of stress: arousal, energy conservation, and exhaustion. Critical incident stress management and debriefing were imperative to keep personnel mentally and physically healthy during this extended period of exposure to terrible destruction and responsibility. Many health professionals contributed to the success of this phase of the operation. Our personnel were directly supported by physician and nurse volunteers from the Department of Family and Preventive Medicine of the University of Oklahoma Health Sciences Center. Massage therapists and chiropractors added a unique constructive element.

### The Sifting Site

As scene workers from many disciplines laboriously by hand removed the contents of the remains of the Murrah Building, a sifting site was set up at the Oklahoma County Sheriff's Training facility to search for body fragments and evidence. This area was also staffed by volunteers under supervision of this agency and personnel from the OU College of Dentistry played a very significant role. As in any bombing such as ours, this activity site remained active for weeks after the initial event.

### Family Assistance Center

The key to the success of such an operation probably resides within the prompt and effective establishment and management of a Family Assistance Center at an adequate physical facility removed somewhat from the scene of the disaster and from local hospitals. The latter are often initially overwhelmed and later must get back to the routine caring for the members of the community. It is our belief that the establishment, management, and site selection of the

Family Assistance Center should primarily be the responsibility of the medical examiner. This was the area in which antemortem data was collected from families by members of the Oklahoma State Funeral Directors Association and other volunteers. The data were then transferred electronically to the Central Division of the Office of the Chief Medical Examiner for computer entry and subsequent comparison with postmortem data.

The Family Assistance Center in our situation was the First Christian Church, a large facility with sufficient space available to designate a given area for each family. It was a relatively controlled environment well suited to meet the many needs of distraught families and friends. This enabled medical examiner representatives to be able to locate a key individual within that family at any time of day or night should there be need for further information or to notify them of a confirmed death. The families were updated formally twice a day by our Director of Operations at set times with nothing being allowed to interfere with that scheduled briefing. Media updates were done in a separate area removed from the families and only after each family briefing had been completed. Security at this facility to assure privacy was maintained by the Oklahoma National Guard. Food services throughout the areas of operation were essential and we were fortunate that at the time of the bombing the Oklahoma Restaurant Association was just completing a meeting in Oklahoma City. The Family Assistance Center included many other quickly organized areas to serve families, not the least of which were a health services clinic, the Office of Chaplain, and a children's play center.

When a positive identification of a decedent was made, that information was relayed from the Office of the Chief Medical Examiner to our representatives at the Family Assistance Center. The death notification team consisted of a member of the Military Chaplain's Service who escorted the family to a very quiet and controlled part of the Church. The notification team consisted generally of one mental health professional, one member of the clergy, one medical person (usually a registered nurse), and two funeral directors who were functioning as medical examiner representatives.

### Comment

The acute phase of the operation lasted for 17 days, but three bodies and one body part were not

recovered until May 23, 1995, after the implosion of the building. For many months the Office of the Chief Medical Examiner participated in family and responder counseling. Ongoing pain and suffering of people involved in this tragedy still go on today and it is not at all unusual for us three-and-one-half years later to visit with families. One major issue for many has been the assurance that the individual released to them and buried by them was actually their relative. Because of the degree of destruction and often dismemberment as well as decomposition, many funeral directors dissuaded relatives from post-mortem viewing of their loved one. It appears that this well intentioned act in many people caused a significant delay in grief processing. We have at their request reviewed with numerous families charts, reports, and photographs taken during our examinations with uniformly positive and beneficial results.

The completion of After Action Reports with data summaries looking at our material in myriad ways and from many different perspectives was necessary to assist the FBI, the US Attorneys office, and to prepare for the subsequent trials of Timothy McVeigh and Terry Nichols. The lucid and in-depth analysis of our observations assisted public health officials and educated investigators, attorneys, judge, and jury with regard to what happened to us on that initially pleasant mid-April morning.

An act of terrorism such as we experienced creates a community stretched beyond its usual capabilities. It leaves lives changed. No one is immune. Planning ahead is essential. Health care personnel should search their community's basic emergency operations plan. The key to success is being aware of available resources, pre-planning for shortcomings and difficult issues, and most importantly relying on teamwork to successfully meet and complete the challenge. J

### The Author

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### Acknowledgement

The staff of the Office of the Chief Medical Examiner would like to acknowledge the contributions from citizens inside and outside Oklahoma who gave so selflessly of their time, energies, and love to not only bring to a successful completion the acute phase of this operation, but also to demonstrate to the world that caring and positive community action are an unsuppressible part of the human spirit and of our American democracy.

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## **The Role of Exposure in Posttraumatic Stress in Youths Following the 1995 Bombing**

Betty Pfefferbaum, MD, JD; Vern L. Moore, EdD; Nicholas B. McDonald, PhD; Brian T. Maynard; Robin H. Gurwitch, PhD; Sara Jo Nixon, PhD

This study investigated the relative impact of various forms of exposure to the 1995 Oklahoma City bombing in middle and high school students seven weeks after the incident. We assessed 3210 youths with an instrument that probed for physical, television, and emotional exposure to the bombing and subsequent posttraumatic stress symptomatology and television reactivity. The majority of youths were exposed through physical proximity — hearing and/or feeling the blast — and through television viewing. These types of exposure, as well as emotional exposure, constituted important variables in the development of posttraumatic stress symptoms and television reactivity. Youths with immediate family casualties were more symptomatic than those without.

### **Introduction**

The 1995 bombing of the Alfred P. Murrah Federal Building resulted in extensive morbidity and mortality. Many were exposed through physical proximity, media coverage, and relation to the deceased and injured. More than one-third of residents participating in a telephone survey conducted in the months following the incident reported that they knew someone killed or injured in the blast.<sup>1,2</sup> Youths were not spared involvement in this disaster. More than one-third of middle and high school students surveyed as part of a study conducted seven weeks after the incident reported knowing someone killed; over 40 percent reported knowing someone injured.<sup>3,4</sup>

Posttraumatic stress disorder (PTSD), while not the only condition associated with trauma, is the most commonly described. PTSD diagnostic criteria provide for various forms of exposure —

direct involvement through victimization or witnessing a traumatic event or indirect involvement through association with a victim.<sup>5</sup> Clinical experience and research document the role of exposure-physical, media, and emotional-in symptom development,<sup>5-9</sup> but the relative impact of various forms of exposure has not been well studied. This report will describe exposure to the 1995 bombing in a sample of middle and high school youths and will examine the relative impact of various forms of exposure on PTSD symptom development. It will further explore the role of exposure in a select subsample of youths who reported casualties in the immediate family.

### **Participants**

The Oklahoma City Public Schools (OCPS) is the second largest school district in Oklahoma. There are approximately 15,200 students in grades six through twelve. The central administration at OCPS distributed the assessment survey to all middle and high schools two days before the summer recess, seven weeks after the bombing.

This study was reviewed and approved by the University of Oklahoma Health Sciences Center Institutional Review Board. Informed consent followed the mechanism established by the OCPS administration. Consistent with school policy, participation was entirely voluntary. Students not wishing to participate were allowed to engage in other activities while the survey was being administered.

A total of 3210 students completed the assessment. Girls ( $n = 1,756$ ; 56.5%) outnumbered boys ( $n = 1,350$ ; 43.5%). Lower grade students predominated with 2,431 youths (78.1%) in grades six through eight. The racial/ethnic distribution of the

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sample revealed 1,357 (43.7%) self-reporting as African American, 1,086 (35.0%) as Anglo, 359 (11.6%) as Hispanic, 135 (4.3%) as American Indian, and 169 (5.4%) as other. Forty-nine (1.5%) youths reported casualties within their immediate family. Of those, 11 (22.9%) were girls; 37 (77.1%) were boys. Thirty-nine (84.8%) were in grades six through eight; 7 (15.2%) were in grades nine through 12. Discrepancies in sample sizes in various categories reflect missing data.

### Clinical Needs Assessment Instrument

The clinical needs assessment instrument was designed specifically for the Oklahoma City bombing to include measures of exposure (physical, television, and emotional), initial responses to the explosion, and posttraumatic stress and other symptoms present at the time of administration. Variables were created by summing responses to multiple questions to increase their stability. The Physical Exposure Variable (PEV) consisted of two items asking participants if they heard and/or felt the explosion. Each item allowed choices from four options. The responses for "Did you hear the bomb?" were "did not hear," "loud," "very loud," and "hurt my ears." The responses for "Did you feel the bomb?" were "did not feel it," "some," "strong," and "terrible."

The dichotomous Emotional Exposure Variable (EEV) was derived from questions about the participant's relationship to direct victims — those killed or injured. The actual items queried relationships to deceased or injured victims, but the variable constructed for this analysis collapsed categories to determine simply "yes" or "no." A "yes" response indicated that the participant knew someone who was killed or injured in the bombing, while a "no" indicated no known deceased or injured.

A single-item "How much bomb-related TV did you watch?" had five response options ("none," "very little," "some," "most of my TV time," and "all of my TV time") and constituted the Television Exposure Variable (TVE). A single item "It is difficult now for me to calm down after seeing things about the bomb on television" with four response options ("not at all," "a little," "some," and "a lot") comprised the Television Reactivity Variable (TVR).

The measure of posttraumatic stress was adapted from the Impact of Event Scale-Revised (IES-R).<sup>10</sup> The IES-R consists of 22 items representing the three PTSD symptom clusters. It includes items measuring intrusion and avoidance from the Revised Impact of Event Scale<sup>11</sup> and items assessing arousal added by Weiss and Marmar.<sup>10</sup> The basic psychometric properties of the IES-R have

| Table 1. Definition of Terms |                                 |
|------------------------------|---------------------------------|
| Terms                        | Definition                      |
| PEV                          | Physical Exposure Variable      |
| EEV                          | Emotional Exposure Variable     |
| TVE                          | Television Exposure Variable    |
| TVR                          | Television Reactivity Variable  |
| PTSS                         | Posttraumatic Stress Symptom    |
| IFCG                         | Immediate Family Casualty Group |
| NFCG                         | No Family Casualty Group        |

been established.<sup>10</sup> Subjects were asked to rate the frequency of the 22 symptoms in "the past seven days" on a scale with four categories of response ("not at all," "rarely," "sometimes," and "often"). The Posttraumatic Stress Symptom (PTSS) score was a summation of all items on this scale.

### Data Analysis

Descriptive statistics were calculated for all groups of variables used in the analysis. Means, standard deviations, and frequencies are reported in the text as appropriate. Inferential statistical comparisons employed three main tests: independent t-tests, one-way analyses of variance, and stepwise linear regression. The central dependent variables were the PTSS score, PEV, TVE, and EEV. The central independent variables were demographic (sex and grade) and presence of family casualty. The casualty variable consisted of two levels: an Immediate Family Casualty Group (IFCG) and a No Family Casualty Group (NFCG). The IFCG consisted of 96 (3.0%) youths who reported death or injury of a parent or sibling. The NFCG consisted of 3,114 (97.0%) youths with no death or injury of parents or siblings; some of these youths did report death or injury of more distant relatives, friends, or acquaintances.

## Results

### Physical Exposure

The majority (n = 2,722; 84.9%) of the sample reported being in school on the day of the bombing. More than 60 percent of the students reported hearing (n = 1,977; 61.6%) and/or feeling (n = 1,981; 61.8%) the blast. The mean PEV for the full sample was 3.78 (SD ± 1.54) with a range of possible scores from 2 through 8. The mean PEV for the IFCG (M = 4.08, SD ± 1.68) was not significantly different than the mean PEV for the NFCG (M = 3.77, SD ± 1.53).

### Television Exposure

Television exposure was also extensive; more than two-thirds (n = 2,133; 66.6%) of the participants

reported that "most" or "all" of their television viewing was bomb related ("most,"  $n = 1,365$ ; 42.6%; "all,"  $n = 768$ , 24.0%). The mean TVE for the full sample was 3.79 ( $SD \pm .96$ ). There was no significant difference in the mean TVE for those with ( $M = 3.60$ ,  $SD \pm 1.20$ ) and those without ( $M = 3.80$ ,  $SD \pm .95$ ) family casualties. TVE correlated with sex, PEV, and EEV for the full sample and the NFCG ( $p = .0001$ ). It correlated with sex for the IFCG ( $p = .009$ ).

#### Posttraumatic Stress at Seven Weeks

The mean PTSS for the full sample was 41.02 ( $SD \pm 12.91$ ) with possible scores scaled from 22 to 88. Sex, grade, PEV, TVE, and EEV correlated with PTSS for the full sample ( $p = .0001$ ). In a stepwise regression to predict PTSS for the full sample, TVE accounted for 6.7 percent of the variance and was a stronger predictor than EEV (5.1%), sex (2.5%), and PEV (2.3%).

The mean PTSS for those with family casualties ( $M = 48.40$ ,  $SD \pm 10.68$ ) was significantly higher than the mean for those without ( $M = 40.79$ ,  $SD 12.91$ ) ( $p = .0001$ ). In a stepwise regression used to predict PTSS in the IFCG, PEV explained 6.9 percent of the variance, TVE explained 1.9 percent, and sex explained 0.4 percent. Using the same variables to predict PTSS for the NFCG, TVE was the strongest predictor accounting for 7.2 percent of the variance, followed by EEV accounting for 4.6 percent, sex accounting for 2.8 percent, and PEV accounting for 2.1 percent.

#### Television Reactivity at Seven Weeks

Most youths reported "no" ( $n = 1,827$ ; 57.6 percent) or only "a little" ( $n = 715$ , 22.6 percent) difficulty calming down after bomb-related television exposure at seven weeks. The mean TVR for the full sample was 1.70 ( $SD \pm .96$ ). For the full sample, girls ( $M = 1.75$ ,  $SD \pm .95$ ) were significantly more likely to report continued reactivity to television exposure at seven weeks than boys ( $M = 1.63$ ,  $SD \pm .96$ ) ( $p = .0009$ ). For the full sample, TVR correlated with PEV, TVE, EEV, and PTSS. When PEV, TVE, and EEV were entered into a stepwise regression for the full sample, TVE explained 1.9 percent of the variance in TVR, EEV explained 1.6 percent, and PEV explained 1.0 percent. We did not enter PTSS into the stepwise regression model because it was highly correlated with TVR.

Those with family casualties ( $M = 2.05$ ,  $SD \pm 1.04$ ) reported significantly more continued reactivity to television viewing at seven weeks than those without family casualties ( $M = 1.69$ ,

$SD \pm 0.95$ ) ( $p = .001$ ). In the IFCG, PEV explained 1.0 percent of the variance in TVR, and TVE explained no significant amount of the variance. TVE explained 2.1 percent of the variance in TVR for the NFCG. EEV explained 1.5 percent, and PEV explained 1.0 percent.

#### Discussion

Exposure to the bombing was extensive and occurred through physical proximity, television coverage, and relationship to the deceased and injured. Youths in this sample were students at middle and high schools in the vicinity of the blast; the bomb site itself was within the perimeter of the school district. Therefore, it is not surprising that so many participants reported hearing and/or feeling the explosion.

The youths' reported television exposure was also great and expected given coverage of the incident in the local media. Virtually nothing except bomb-related programming appeared on many television channels for days after the blast and coverage remained extensive at the time of this survey.

The degree of emotional exposure through relationship to the direct victims was alarmingly high. A community telephone survey<sup>1,2</sup> and our work with this sample<sup>3,4</sup> revealed the extent of this exposure. For the purposes of this report, we examined the sample of youths as a whole with additional analyses for those with casualties in the immediate family.

Our finding that girls had significantly higher PTSS scores than boys is supported in the literature<sup>12-15</sup> though not all studies agree.<sup>6,8</sup> The literature is even less settled with respect to the influence of age and developmental level on posttraumatic response. Our sample was heavily weighted toward lower grades making definitive assessments of age-related differences difficult.

Physical, media, and emotional exposure are widely believed to be important in posttraumatic response.<sup>5,9</sup> Pynoos and colleagues<sup>9</sup> reported that closer physical proximity positively correlated with increased PTSD symptom development in children following a sniper incident at their school. Milgram and colleagues<sup>7</sup> suggested that emotional proximity was a more important predictor of response in youths whose peers were killed or injured in a school bus accident. Nader and colleagues<sup>8</sup> documented the role of media exposure in symptom development in Kuwaiti children following the Persian Gulf War. Our study supports all of these findings. Physical, television, and emotional exposure correlated with posttraumatic stress at seven weeks. Of note, television exposure was a

stronger predictor of PTSS than either physical or emotional exposure for the full sample and for the group without family casualties. The relative importance of television exposure in PTSD symptom development in these samples is of interest and suggests potential preventive measures. While television provided an important source of news and public education, it also served as a traumatic cue perpetuating emotional and physiologic reactivity for some individuals.

The group with family casualties had significantly higher PTSS scores than the no family casualty group supporting the role of emotional exposure in sustaining PTSD symptomatology. For the group with family casualties, physical exposure was a better predictor of continuing posttraumatic stress than television exposure. This was true despite there being no significant difference in physical and television exposure between the two groups. Therefore, prevention and intervention strategies for those with family casualties may focus on dealing with the impact of physical exposure. This does not, however, obviate need to address the role of television exposure in the recovery process.

Reactivity to bomb-related television exposure at seven weeks also correlated with physical, media, and emotional exposure. It should be noted that most youths reported "no" or only "a little" difficulty with television reactivity at seven weeks which may have produced a floor effect negating any significant differences in the stepwise regression analysis using TVR as a dependent variable. The strong correlation between TVR and PTSS was predicted because, while not a specific item on our PTSS measure, reactivity to traumatic stimuli is among the symptoms identified in the diagnostic criteria for PTSD.<sup>5</sup> This too suggests that television exposure be monitored in the aftermath of community trauma.

### Limitations

Caution must be exercised in examining our data with respect to PTSD. Our measure of PTSS represents a symptom count, not a diagnosis. The mean of 41.02 for the full sample could be obtained with report of each of the 22 items occurring less often than "rarely." In addition, this PTSS scale does not query severity of symptoms but rather asks about frequency. Furthermore, some maintain that PTSD symptoms are a normal response to trauma. They may also represent an important protective effect reflecting, for example, symptoms associated with the physiologic "fight or flight" response to danger. Finally, the unequal sex and grade distribution of our sample may have confounded the results,

and other factors not examined in this report, such as initial response, symptoms of grief, and family disruption, may also be important in sustaining posttraumatic symptoms.

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## **Mental Health Response to the Oklahoma City Bombing**

Phebe Tucker, MD; Sharron D. Boehler, RN, MN, MBA;  
Warren Dickson, PhD; S. Jay Lensgraf, MD; Dan Jones, PhD

The bombing of the Alfred P. Murrah Federal Building in Oklahoma City in 1995 represented the deadliest act of terrorism to date on U.S. soil, with 168 killed, over 800 injured, many bereaved, and more than 16,000 in the downtown area shaken by the blast. Moreover, 12,000 individuals were involved in rescue efforts, often performing grisly tasks such as body handling and caring for the injured. As physical injuries were treated, emotional consequences began to surface, challenging mental health administrators and caregivers in the public and private sectors. Patterns of increased mental health utilization were seen in the local community mental health system, in the federally-funded, community-based Project Heartland, and among clinicians in private practice. Those who sought help from clergy, primary care physicians, and informal support groups are not included in this report, and remain undocumented.

Significant terrorist acts within a community pose unique problems to mental health administrators. A growing body of research addresses these problems, which increasingly confronts civilian populations both within the United States and abroad. Holloway et al<sup>1</sup> describe the importance of planning and preparation in recovery efforts to "diminish the terrorists' ability to achieve their overall goal—the induction of terror." Importantly, the sense of helplessness experienced by a community and its leaders in the wake of terrorism requires an organized recovery response. Medical and mental health responders must be trained to recognize symptoms of anxiety, depression, and dissociation in citizens. Efforts should be made to prevent disability, return victims to the social

environment and reduce rumors and panic by communicating accurate information. As Holloway points out,<sup>1</sup> further chaos may ensue due to conflicting and overlapping roles of health care, law enforcement and social welfare agencies. Krug et al<sup>2</sup> described cooperation among agencies in Oklahoma City in the months after the bombing in an effort to avoid duplication of services and revictimization.

Within the first days after the Oklahoma City bombing, connections were made between administrators of the Oklahoma Department of Mental Health and Substance Abuse Services (ODMHSAS), the Oklahoma Department of Health (ODH), the Oklahoma Civil Emergency Management Agency, the governor's office, the state medical examiner, the American Red Cross, and the National Organization for Victims Assistance (NOVA). Within the first 72 hours, a toll-free 24-hour hotline for crisis counseling and referral was established, followed by mobile outreach teams in each of the six metropolitan community mental health centers. As the dead were being identified, teams were formed from the faculty and trainees from the Department of Psychiatry at the University of Oklahoma, the staff of community mental health centers, private mental health professionals, clergy members, and representatives from the medical examiner's office. These teams, led and trained by the American Red Cross, engaged in the lengthy process of notifying families of deaths of their relatives. At the same time, other mental health professionals conducted debriefings and grief counseling for community members at various sites in the city. Additional early efforts of the ODMHSAS

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involved training mental health professionals in disaster response, especially recognizing and treating acute stress disorder, posttraumatic stress disorder and bereavement issues. Primary care physicians were also trained by the ODMHSAS in disaster intervention. Further links were made with the Aging Services Division of the State Department of Human Services, the Department of Veterans Affairs, and the Oklahoma City Interfaith Council to address needs of special segments of the population.

Several studies have underscored the importance of attending to the mental health needs of emergency workers, medical personnel, and medical examiners.<sup>3-5</sup> As pointed out by Alexander, medical personnel assisting in disaster work can become hidden victims.<sup>5</sup> Additionally, the death of a child can be particularly distressing to emergency workers.<sup>6</sup> Due to the high mortality rate among children in the Murrah Building's day care center, both medical workers and personnel at the medical examiner's office experienced this stressor. Body handling can cause emotional problems for recovery workers;<sup>7</sup> given the large numbers of bodies of fellow community members and their dismembered state, such work was particularly grisly. Critical Incident Stress Debriefing (CISD) has been described and promoted by Simon<sup>8</sup> and others to help disaster workers deal with the acute psychological sequelae of trauma, including terrorism.

With training in CISD provided by members of the Federal Emergency Management Agency (FEMA), the National Organization for Victims Assistance (NOVA), the American Red Cross, and members of University of Pittsburgh's crisis team, mental health professionals conducted debriefing sessions. Receiving these services were Emergency Medical Services Authority (EMSA) workers, police officers, firefighters, medical personnel, and their spouses. Also debriefed were mental health professionals, clergy and medical examiners who assisted the American Red Cross, and community members who were downtown during the bombing.

Despite the above efforts to assist rescue workers, Oklahoma City Police Department's Chaplain Jack Poe pointed to evidence for emotional distress in some local police officers and firefighters. In those groups, the number of divorces rose by 20 to 25 percent as of mid-year 1998.<sup>9</sup> Additionally, at least four who were connected to the bombing have committed suicide. It is unknown how many of these individuals

sought mental health intervention or had a prior history of emotional illness.

Approximately five months after the bombing, in the third week of September of 1995, 1,696 mental health professionals in private practice were mailed a survey assessing treatment rendered as a result of the event. Responses were received from 314 clinicians, representing a response rate of 19 percent. This relatively low response rate may have been due to increased clinical demands for bombing-related mental health issues at the time, or perhaps due to a lack of understanding by mental health professionals of the importance of documenting such increases. Responding clinicians reported an active caseload of 6,431 patients, of whom 1,138 (17.7%) had bombing-related needs. Approximately 45 percent of these patients were new patients since the bombing, with the remainder having already been in treatment. Thus, practitioners surveyed reported an approximate 8.0 percent increase in [new] patients with bomb-related problems. This sample may not be representative of the greater population of mental health providers, as those with affected patients would be expected to respond more often than those without. However, this survey provides a rough estimate of the bombing's effect in increasing mental health needs among patients of private practitioners.

Community mental health centers in Oklahoma County served the highest ever number of clients in the month following the bombing (May 1995). Patients totaled 5,857 during that month. In addition, a 5.66 percent increase in patients from April to May was one of the largest month-to-month increases in the previous several years. Moreover, prior to this, there was an average 2.5 percent decrease in patients from April to May, so that taking into the account the expected change, the real increase in May 1995, was 8.2 percent ( $5.66 + 2.5$ ), or approximately 450 clients. However, in the subsequent months, numbers decreased slightly such that by August of 1995, the number served was almost exactly the usual August average. Thus, the community mental health centers appeared to experience a short-term increase in clients served, with a return to normal demands for treatment in the months following. This is not surprising, as community mental health centers generally target severe and chronic mental illnesses such as schizophrenia and bipolar disorder. Individuals with more reactive illnesses such as posttraumatic stress disorder or major depression (the most common mental disorders

following trauma) may be more likely to seek continuing treatment from private mental health professionals, primary care physicians, or charitable organizations established to treat disaster victims.

In terms of specialized forms of treatment in areas of substance abuse and domestic violence, such agencies funded by the community mental health system did not experience a significant increase in demand from April to October 1995. However, a look at month-to-month utilization of substance abuse services reveals slightly more utilization in July and August. Despite this brief increase, Oklahoma County had the least change among the three geographic areas reported, indicating that other factors may be causal, such as normal seasonal fluctuations. However, it would be inaccurate to say that substance abuse or domestic violence did not increase after the bombing; rather those cases that reported to the community mental health system remained constant in number. Several private inpatient and outpatient facilities within the Oklahoma City metropolitan area serve those with primary substance problems and with dual diagnoses. Similarly, official agencies would only intervene in cases of domestic violence reported to law enforcement officers, the department of human services, etc., and would not be likely to see the less severe cases.

Many community members sought mental health interventions after the bombing from Project Heartland. This community-based organization was established by the Governor through funding from the Federal Emergency Management Agency (FEMA) to address needs of those affected emotionally by the disaster. Services offered included crisis intervention, support groups, outreach and educational programs, consultation, and referral to mental health professionals for those who needed treatment. From May 1995 through November 1997, almost 9,000 persons received services from Project Heartland.

Although formal psychiatric diagnoses were not assigned to Project Heartland patients, a survey conducted from late October to November of 1995 provides insight into the emotional and behavioral sequelae. A thorough description of the entire survey and methodology is described by Tucker and colleagues.<sup>10</sup> Of 170 adult patients offered the survey, 86 agreed to participate and provided informed consent. The survey measured demographic variables and levels of exposure to the disaster (proximity to the bomb, closeness to victims killed or

injured, experience in assisting victims, attendance at funerals, and time spent watching TV reports). Thirteen items drawn from the Texas Inventory of Grief<sup>11</sup> measured bereavement. Eleven questions assessed emotional reactions and physiological arousal immediately after the bombing. Twenty-two questions measured symptoms of posttraumatic stress disorder (PTSD)—intrusive memories, avoidance of trauma reminders, and physiological arousal—in the week preceding the survey. Fifteen of these PTSD symptoms were from the Impact of Event Scale, a self-report assessment tool of proven validity and reliability.<sup>12</sup>

The survey measured demographics for respondents who sought help from Project Heartland. They were mostly female ( $n = 60$ , or 71.4%), averaging 42 years (range of 21 to 84). Ethnic grouping was mainly Caucasian ( $n = 55$ , or 67.1%), followed by African American ( $n = 20$ , or 24.4%), Native American ( $n = 4$ ), and Hispanic ( $n = 1$ ). Questions assessing levels of exposure to the bombing determined that most were in the downtown area near the blast; 67 (78.8%) reported damage to nearby buildings or cars, and 44 (51.8%) were told to leave their building. Most were not injured by the blast ( $n = 70$ , or 82.4%), although 13 were injured "a little" and two were injured "a lot." Most did not report deaths among family ( $n = 82$ , or 95.3%) or friends ( $n = 68$  or 79.1%), indicating that grief was not a major issue. This level of bereavement was consistent with two other studies performed in the community after the disaster—one a sample of youth<sup>13</sup> and one a general sample in collaboration with the Gallup Organization.<sup>14</sup>

Clinicians treating individuals with posttraumatic stress symptoms are interested in knowing which emotional and physiological responses immediately after trauma are most predictive of later distress. This knowledge may assist in early identification of those at risk for later mental health problems. To identify such risk predictors among respondents in this survey, Pearson correlation coefficients were calculated comparing peri-traumatic responses and total posttraumatic stress scores six months later. As all peri-traumatic responses correlated significantly with later PTSD symptomatology, a multiple regression analysis was performed. Two items, "upset by how other people acted" and "nervous or afraid," had highly significant correlations using a squared multiple regression analysis ( $r = .36$ ;  $F = 20.77$ ,  $df = 2, 75$ ,  $p < .001$ ). These two reactions immediately after the

bombing predicted a little more than one-third of the total variance in the posttraumatic stress symptom scores. Thus, among this sample of community members who were mostly downtown during the blast and who were disturbed enough to seek mental health intervention, those who were initially highly fearful and those who were concerned by others' actions were more likely to have later PTSD symptoms.

Other studies of traumatized populations have differed from these findings; several have identified peri-traumatic dissociation as most predictive of later posttraumatic stress. Koopman<sup>15</sup> found peri-traumatic dissociation and level of exposure to foretell distress among survivors of the 1991 Oakland-Berkeley, California firestorm. Marmar<sup>16</sup> identified early dissociation as a harbinger of later PTSD among Vietnam combat veterans. We may understand this difference among Project Heartland patients as a possible unique consequence of terrorism. Terrorism is designed to create panic and chaos in a population, and diminished interpersonal trust often results.

In summary, the Oklahoma City bombing led to mobilization of resources among mental health administrators to meet immediate needs for grief counseling, debriefing of rescue workers and victims, and crisis intervention. Moreover, a specialized mental health agency (Project Heartland) was implemented locally through federal funding to provide longer-term interventions such as support groups, outreach, and referral for treatment. Private mental health practitioners and metropolitan community mental health centers reported transient increases in bombing-related services. However, despite these many efforts to assess and address mental health needs of various groups of community members, residual psychological effects have been described in some rescue workers and community members. It appears that long-term mental health intervention will continue to be needed by some. In addition to utilization of formal mental health services, continued job disability can be another measure of residual distress after trauma. The Oklahoma Department of Health has determined that of 341 bombing survivors

surveyed, 6.5 percent were off work for more than a year, and an additional 13.8 percent (including retirees) never returned to work.<sup>9</sup> Much of this disability may be due to emotional sequelae complicating physical injuries, and represents continuing challenges to physicians in all sectors.

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## Perceived Effects and Recovery in Oklahoma City Firefighters

Sara Jo Nixon, PhD; John Schorr, PhD; Angela Boudreaux; Robert D. Vincent, PhD



*Photo courtesy of the Oklahoma Air National Guard*

This survey of 325 Oklahoma City Firefighters examined their perceptions of the effect of the bombing, their recovery and their sources of support. Other variables that were considered in this analysis included age, usefulness of the Critical Incident Stress Management (CISM) procedures, and attitude, an aggregate variable that accounted for job satisfaction. Of particular importance in this analysis was the finding that support from "faith" was a primary predictor of positive outcome and positive attitude over the one-year period. However, the effect of the variable differed for older and younger firefighters. That is, there was a greater proportion of younger firefighters among those reporting greater support from faith. These data suggest that, at least in this geographic area, chaplains, and other spiritual leaders may play a particularly important role in the aftermath of such a disaster.

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### Introduction

The explosion on April 19, 1995, was only the beginning of the tragedy for rescue workers, firefighters, medical and mental health personnel. The hours, days and weeks following the disaster were consumed by efforts to meet the needs of survivors, rescue those still alive, recover the bodies of those deceased, and sufficiently sustain the structure to allow these efforts. Of the groups engaged in the aftermath of the disaster, perhaps none was more directly affected than the Oklahoma City firefighters who undertook both the rescue and recovery efforts.

Study of the effects of a disaster on rescue workers is relatively limited and existing studies are constrained by the nature of the disaster, the specific study populations, and the nature of the assessment. Despite the limitations of the literature, it does provide direction for study. Recurring variables in this work are age, exposure, spousal support, co-worker support and perceived threat.<sup>1-3</sup> Race/ethnicity<sup>2</sup> and/or gender may also be relevant variables.

Overall, it appears that older rescuers fare better than their younger colleagues. The reduced effect in older rescuers may be due to the fact that the older workers may be more likely to serve in administrative capacities and, therefore, experience less direct exposure. A second hypothesis is that older rescuers may have more experience in similar or related situations that may better prepare them for the event. A third hypothesis is that older rescuers have better established support networks that may reduce the negative effects. For each of these possibilities, age is confounded with exposure, previous experience, and emotional support networks. To better understand the effects of age, it must be systematically separated from other related factors.

Emotional support is an important factor in any negative situation. Some studies have suggested that the source of the support may vary as a result of experience. For example, McCarroll and colleagues<sup>1</sup> found that experienced recovery workers (i.e., dentists in this case) were more likely to report the use of co-worker support, whereas less experienced participants reported a greater dependence on spousal support.

Exposure is obviously implicated in negative outcomes.<sup>5</sup> Similar to studies of victims,<sup>4,6</sup> increased exposure is associated with negative outcome in rescue/recovery workers in a number of disasters, including the Mt. Carmel incident, the Jonestown incident, the collapse of the Hyatt Regency walkway and the Nimitz freeway collapse.

As noted previously, higher levels of perceived threat are also a risk factor for negative outcomes. The degree of perceived threat was not addressed in the survey that was the focus of the current paper. However, it was addressed in an earlier postcard survey administered by the Oklahoma State Department of Health. Of those returning the postcard, 40 percent of the firefighters reported they had been exposed to a substantially threatening situation at least once in the bombing efforts.

As mentioned earlier, another potentially important variable is gender. Women are less studied in this research largely because they generally constitute a very small proportion of the rescue personnel. The current survey provides little insight regarding these variables. The number of women among the OKC Firefighters is relatively small and the number who returned surveys even smaller. Therefore, we were unable to identify gender effects. Similarly, the number of minority race responses was relatively low and, therefore, we have not pursued an examination of this variable in the current analysis.

In summary, there is a growing literature on the effects of disaster on both victims and rescue/recovery workers. However, these studies are constrained by the nature of the disaster and required rescue efforts. Most of the work focuses on so-called natural disasters and on rescuers who are "brought in" to handle the site. Specifically, there is relatively little known regarding the mental health consequences of a man-made (as opposed to a "natural") disaster on firefighters who are exposed for extended times and who are a part of the larger affected

| Table 1. Age Distribution of Sample |        |             |
|-------------------------------------|--------|-------------|
| Age Group                           | Number | % of Sample |
| 21-30                               | 73     | 23.2%       |
| 31-40                               | 139    | 44.1%       |
| 41-50                               | 89     | 28.3%       |
| 51-60                               | 14     | 4.4%        |
| Total                               | 315    | 100.0%      |

| Table 2. Racial/Ethnic Distribution |        |             |
|-------------------------------------|--------|-------------|
| Race/Ethnicity                      | Number | % of Sample |
| African American                    | 28     | 8.7%        |
| American Indian                     | 13     | 4.0%        |
| Hispanic                            | 3      | 0.9%        |
| White (Not Hispanic)                | 269    | 83.8%       |
| Other                               | 8      | 2.5%        |
| Total                               | 321    | 100.0%      |

| Table 3. Experience: Years in Firefighting |        |             |
|--|--------|-------------|
| Years in Firefighting                      | Number | % of Sample |
| 0  | 5      | 1.5%        |
| 1-8  | 118    | 36.3%       |
| 9-15                                       | 89     | 27.4%       |
| 16-23                                      | 75     | 23.1%       |
| >23  | 38     | 11.7%       |
| Total                                      | 325    | 100.0%      |

community. Given this situation, it was apparent that a concentrated study of firefighters was needed. Of specific concern for this study, given the clinical and administrative implications, were the firefighters' perception of the event, their perceived sources of emotional support and their perceived recovery.

The current study reflects both a collaborative and cooperative effort. Collaboratively, it engaged the Department of Psychiatry and Behavioral Sciences, Oklahoma State Department of Health, and Stetson University in Florida. In fact, it was one author's previous work in disaster research and another author's interest in the OKC situation that initiated the study and provided the initial survey structure. Cooperatively, it engaged the Oklahoma City Fire Department and its leadership. Although the OKC Fire Service administration maintained its distance in order to preserve the scientific integrity of the study, their willingness to support these efforts reflected their commitment to their firefighters and, without its endorsement, this work could not have been completed.



Photo courtesy of the Oklahoma Air National Guard

Table 4. Exposure: Days on Site

| Days Group | Number | % of Sample |
|------------|--------|-------------|
| 0          | 1      | 0.3%        |
| 1          | 9      | 3.0%        |
| 2-8        | 178    | 59.9%       |
| 9-13       | 58     | 19.5%       |
| >13        | 51     | 17.2%       |
| Total      | 297    | 100.0%      |

Table 5. Levels of Emotional Support

| Spouse/SO      | Number | % of Sample |
|----------------|--------|-------------|
| Very High      | 127    | 39.4%       |
| High           | 98     | 30.4%       |
| Moderate       | 45     | 14.0%       |
| Low            | 19     | 5.9%        |
| Very Low       | 2      | 0.6%        |
| None           | 6      | 1.9%        |
| Not Applicable | 25     | 7.8%        |
| Total          | 322    | 100.0%      |
| Co-Workers     | Number | % of Sample |
| Very High      | 40     | 12.4%       |
| High           | 96     | 29.7%       |
| Moderate       | 142    | 44.0%       |
| Low            | 24     | 7.4%        |
| Very Low       | 9      | 2.8%        |
| None           | 5      | 1.5%        |
| Not Applicable | 7      | 2.2%        |
| Total          | 323    | 100.0%      |
| Faith          | Number | % of Sample |
| Very High      | 80     | 25.2%       |
| High           | 90     | 28.3%       |
| Moderate       | 72     | 22.6%       |
| Low            | 25     | 7.9%        |
| Very Low       | 8      | 2.5%        |
| None           | 5      | 1.6%        |
| Not Applicable | 38     | 11.9%       |
| Total          | 318    | 100.0%      |

## Methods

### General Methodology

Critical to the successful conduct of this study was the development of an acceptable instrument. The socio-cultural characteristics of the firefighter community necessitated that confidentiality be strictly protected and the questions be constructed in a non-threatening manner (i.e., the questions and response options not be perceived as too invasive). Early discussions with firefighter representatives provided guidance regarding specific detail, such as acceptable wording.

Following development, the questionnaire was distributed through the firefighters' mailboxes at the various stations. Surveys were returned directly to research personnel in the Department of Psychiatry and Behavioral Sciences and were not seen by Fire Service administration. These surveys had no identifying information and thus, it was impossible to link responses to specific respondents. The response rate was 325 (39.1 percent). This response rate was lower than we had anticipated, but likely reflects a number of factors. First, there was some distrust on the part of the firefighters regarding the confidentiality of the responses and whether this information could be used in a way which might adversely affect performance ratings. This concern existed despite the fact that we explicitly stated that the data could not be linked to specific persons and would not be available, except in aggregate form, to other persons including administration.

Second, because of our statewide commitment to protecting the survivors and rescue workers from unnecessary intrusion, the project was delayed until after the first anniversary in April 1996. This delay may have increased non-response rates. Because of the anonymity of the responses, we had some difficulty in comparing respondents with non-respondents. However, breadth of experience and age, which is represented in the sample, provides some credibility regarding the sample constitution. The survey data herein discussed were collected in April, May and June 1996.

### Survey Structure

The survey was divided into subsections covering demographic information, sources of perceived emotional support, job-related experience and exposure in the rescue/recovery efforts and general attitudes regarding the role of government and the motivation of others. On most questions, respondents were asked to rate the degree to which an item was applicable. The survey concluded with the opportunity to provide open-ended feed-

back regarding the bombing incident. The survey and protocol were approved by the OUHSC Institutional Review Board. Consistent with standard survey procedure, return of the survey was interpreted as consent.

Results

In order to focus the discussion, a sub-sample of the variables most closely associated with perceived effect and perceived recovery is presented.

Demographic Variables

Demographic information regarding the respondents is provided in Tables 1, 2, and 3.

Exposure Variables

The distribution for the number of days each of the respondents spent at the bombsite suggested that significant breaks in the distribution occurred after one, eight and 13 days of onsite duty. Table 4 provides the frequency distribution for this variable.

Emotional Support Variables

The reported levels of emotional support from spouses/significant others, co-workers and faith are reported in Table 5. Given our geographic location within the "Bible Belt," the issue of support from faith is further examined in additional analyses.

Attitude and Effect Variables

In our efforts to avoid threatening questions, we were left with few direct questions of perceived effect or recovery. We did ask "How would you describe the effect the Murrah Federal Building incident had on you?" with response options being "mild," "moderate," "severe," "don't know" and "no effect." For respondents who provided anything other than a "no effect" response, a second question was asked, "How would you describe your feelings/level of recovery?" with the options being "full recovery," "somewhat recovered" and "not recovered."

We also asked about the perceived usefulness of the Critical Incident Stress Management (CISM) procedures used in debriefings during the rescue/recovery efforts. Table 8 shows the distribution of responses to this question. Approximately 63 percent of the respondents reported that the CISM was either somewhat or very helpful, while 22.5 percent reported that it was not helpful.

Recognizing the retrospective assessment of the effectiveness of CISM might be influenced by the perceived need for the services, we con-

| Table 6. Perceived Effect |             |
|---------------------------|-------------|
| Level of Effect           | % Reporting |
| Severe                    | 12.8%       |
| Moderate                  | 51.1%       |
| Mild                      | 17.1%       |
| No Effect                 | 7.2%        |
| Don't Know                | 11.8%       |

| Table 7. Reported Perceived Recovery |             |
|--------------------------------------|-------------|
| Level                                | % Reporting |
| Not Recovered                        | 5.0%        |
| Somewhat Recovered                   | 47.0%       |
| Full Recovery                        | 47.0%       |

| Table 8. Helpfulness of CISM |        |             |
|------------------------------|--------|-------------|
| Helpfulness                  | Number | % of Sample |
| Helpful to Very Helpful      | 94     | 29.9%       |
| Somewhat Helpful             | 105    | 33.4%       |
| Not Helpful                  | 71     | 22.6%       |
| Couldn't Judge               | 44     | 14.0%       |
| Total                        | 314    | 100.0%      |

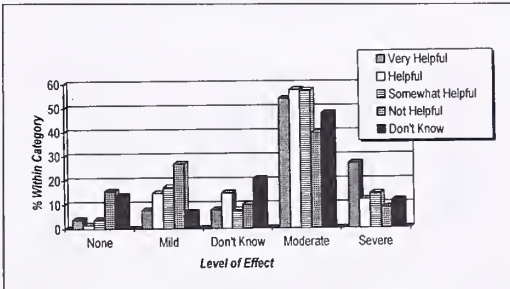


Figure 1. CISM Helpfulness and Bomb Effect

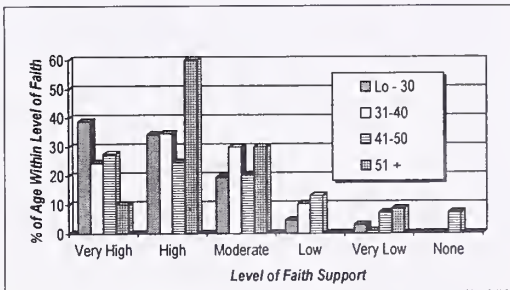


Figure 2. Faith Support by Age Group

sidered the interaction of the perceived CISM usefulness with the effect of the bombing (Fig. 1). As one might expect, those who believed the bombing had a larger effect on them were more likely to endorse CISM's usefulness.

Similarly, given the importance of both emotional support and age, it appeared appropriate

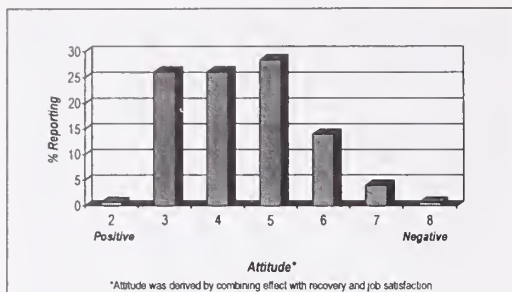


Figure 3. Attitude Distribution Across OKC Sample

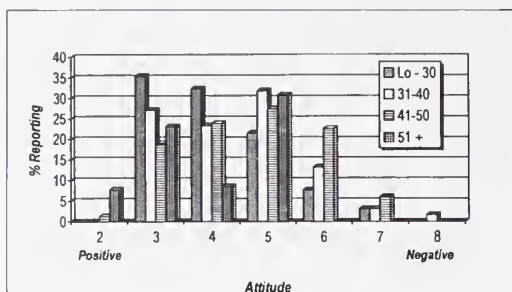


Figure 4. Attitude Distribution by Age Group

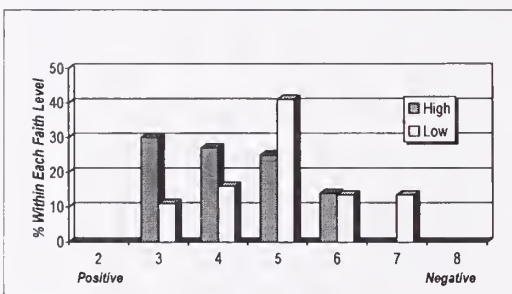


Figure 5. Emotional Support from Faith as Related to Attitude

to examine their interaction. Sufficiently high levels of emotional support from spouses and other family were reported that differences were unlikely to be observed. Therefore, we focused on the interaction of the role of support from faith with age (Fig. 2). It is interesting to note that the 41- to 50-year-old age group comprise the primary constituents in the three lowest ranges for faith-derived emotional support.

As a more comprehensive measure of recovery, we chose to aggregate current job satisfaction, which is frequently associated with self-esteem, particularly in males, with effect and recovery. We refer to this variable as "attitude" because we believe it reflects a more global state of mind, and is perhaps, a more sensitive assessment of firefighters' perception of their current status.

Figure 3 illustrates the overall distribution of the variable attitude. Outliers and invalid

responses (e.g., those with more than one response marked, unclear markings, etc.) were removed, leaving 299 valid responses. The distribution suggests that the majority of participants are currently experiencing at least a moderately positive attitude, with more than half (52.9%) reporting a score of 4.

It was likely that attitude might be differentially related to age and/or emotional support. If so, these factors might provide valid clues regarding intervention and/or risk (Fig. 4). A generally positive attitude was reported by all groups, as noted previously. However, this analysis reveals that the younger groups are more likely to produce a negative attitude score than are those in the oldest age range (over 51).

Finally, we looked at the interaction of emotional support from faith as related to attitude. To best illustrate the relationship, we divided the levels of faith support into two categories: the "high" group, whose members reported either very high, high or moderate levels of emotional support from faith; and the "low" group, which was composed of those respondents who endorsed either low, very low or no emotional support from faith. Those endorsing "not applicable" were not included in this analysis. This analysis reveals a compelling relationship between support from faith and positive rating of our global attitude variable.

### Conclusions and Implications

These data reflect the high degree of exposure that the OKC firefighters experienced in the aftermath of the bombing. They also reflect the substantial levels of support they received from both family and a wider community. As might be expected, faith also provided a significant source of support.

One of the factors examined in previous studies — age — did not have the predicted effect. In prior work, older participants have tended to fare better than younger ones. In the current assessment, older participants were the only members in the more negative levels of our attitudinal variable. This finding needs further examination to clarify the potential negative effects for older firefighters.

However, it should be noted that this negative effect does not necessarily reflect on any aspect of their work, particularly during the rescue/recovery effort. Although some might argue that the data suggest that older workers should have restricted exposure, we would not. Older rescue workers may be among the most experienced and highest qualified. To restrict their participation might reduce the effectiveness

of the efforts. We believe that these data suggest this group should be provided with additional support via any of a number of potential sources (e.g., CISM, group work, individual work, etc.). Furthermore, the age difference may have arisen because older workers may have been more willing to express their concerns than younger firefighters. That is, there is no real age difference in the experience, only in the expression of the experience. If this latter case is correct, efforts to help younger firefighters express their concerns and perceptions without fear of retribution is needed. There were efforts to provide such an environment, but it is not clear that the efforts were entirely effective (i.e., accepted as "safe").

The interaction between support from faith and attitude is an interesting one and one which may shed some light on those most at risk for negative mental health consequences. Those persons reporting the highest levels of support from faith were also those subjects who reported more positive ratings on the global attitude variable. Remembering that attitude is comprised of perceived effect, perceived recovery and job satisfaction, the interaction suggests that a strong faith base may affect the interpretation of the event (i.e., the perceived effect), the process of recovery over the previous year, and the interpretation of the work environment during a period of high stress. In fact, in a post-hoc regression analysis conducted to try to identify the primary predictors of attitude, faith was identified as one of its primary predictors.

This study is only an initial review of these data. There are a number of other variables that should and will be considered in later analyses. Some of these variables include the issue of injury (on previous calls), the number and ages of children in the home, and, over time, whether individuals sought professional intervention. Of related concern is how these experiences influenced the

firefighters' perceptions of the larger community, their safety and that of other Oklahomans.

Although we are only now completing statistical work on this first survey, we should note that a second survey was completed approximately one year after the first (1997) and a third (and final) survey is currently nearing completion. This approach will provide a longitudinal assessment of changing responses with time and allow us to separate short-term from longer-term effects. This latter step is essential for planning for the mental health needs in future, similar disasters, which, of course, are inevitable. □

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#### Acknowledgments

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## **A Prospective Study of Long-Term Health Outcomes Among Oklahoma City Bombing Survivors**

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A follow-up study was conducted to identify long-term physical and emotional outcomes among Oklahoma City bombing survivors. Baseline data were gathered by the Oklahoma State Department of Health in 1995. Follow-up data were gathered by telephone interviews of survivors from 1-1/2 to 3 years after the bombing. The frequency of medical diagnoses, symptoms, medical cost, physical and social life changes, and services utilized since the bombing were assessed.

A total of 494 persons were interviewed, 92 percent had been physically injured in the bombing. Seventy-nine percent of persons interviewed rated their general health status as "good," "very good," or "excellent." Overall, one-fourth to one-third of survivors reported being newly diagnosed with audiologic changes, anxiety, and depression since the bombing. One-third of persons reported pre-existing medical conditions that had worsened since the bombing including depression (26%) and asthma/bronchitis (22%). The most frequently reported posttraumatic stress disorder symptoms were "being jumpy or easily startled" and "recurring distressful thoughts of the bombing." The most frequently utilized medical services were psychological counseling (63%) and audiology services (48%). Total costs were estimated at \$5.7 million. Overall, persons who had been hospitalized with bombing injuries reported higher rates of diagnoses, symptoms, and services utilization.

These findings suggest that a large proportion of survivors of a terrorist bombing, especially those seriously injured, will experience long-term physical and/or emotional outcomes

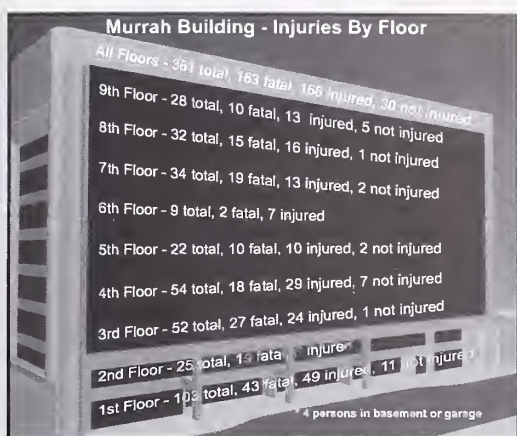
and increased need for treatment for bombing-related medical conditions. All survivors should be carefully assessed over time for auditory damage, depression, anxiety, and posttraumatic stress disorder.

### **Background**

Terrorist bombings are an increasing international problem occurring with greater frequency and charges of detonation. The United States has suffered recent terrorist attacks abroad with the 1996 bombing of American Air Force troops in Dhahran, Saudi Arabia,<sup>1</sup> and the 1998 bombings of United States embassies in Tanzania and Kenya.

On April 19, 1995, the worst terrorist bombing on U.S. soil occurred when the A.P. Murrah federal building was bombed. Within days following the bombing, Oklahoma's Commissioner of Health, J.R. Nida, MD, declared bombing injuries and related health conditions "reportable" to the state health department for special study. The Injury Prevention Service (IPS), Oklahoma State Department of Health (OSDH), conducted an investigation to determine the magnitude of injuries incurred as a direct result of the bombing. The IPS used multiple data collection methods to gather information about the number, types, and severity of injuries incurred and the locations of injured and uninjured persons at the time of the blast. A total of 592 survivors were treated for injuries; 83 persons were hospitalized and 509 persons were treated as outpatients within one week following the bombing.<sup>2</sup> In addition to reports from hospitals and physicians a census was taken to determine the number and locations of occupants at the time of the blast in five of the

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Graphic courtesy of Southwestern Bell Telephone

most heavily damaged buildings (Murrah, Journal Record, Water Resources, YMCA, and Athenian buildings). Information about 1,092 injured and uninjured survivors directly exposed to the blast was compiled in a registry.

The types of injuries suffered in other terrorist bombings have been documented in numerous previous reports.<sup>3-7</sup> The majority of survivors in these reports sustained soft tissue injuries that were treated on an outpatient basis; a smaller percentage of critically and seriously injured people required hospitalization. One exception was the World Trade Center bombing where the majority of injuries sustained were smoke inhalation and minor abrasions and contusions.<sup>8</sup>

Few studies have followed bombing survivors over time to determine the long-term physical and emotional outcomes that result. Blocker, Blocker, and Graham conducted a comprehensive medical survey of survivors of the Texas City disaster nine years after the 1947 disaster in which 2,300 tons of ammonium nitrate loaded on a ship and docked next to a Monsanto chemical plant exploded killing 560 persons and injuring 3,500.<sup>9</sup> Abenham, Dab, and Salmi assessed the rates of posttraumatic stress disorder (PTSD) and other emotional outcomes among 254 civilian survivors of terrorist attacks that occurred in France between 1982 and 1987.<sup>10</sup>

The existence of the OSDH registry provided a unique source of baseline exposure data and a well-defined population of bombing survivors. A follow-up study was conducted to: 1) assess the overall health status of survivors of the Oklahoma City bombing; 2) collect further details about the causes of injuries; 3) determine relationships, if any, to exposure variables

(i.e., severity of injury and proximity to the blast); and 4) ascertain the incidence and types of long-term health outcomes and services utilized following the bombing. This report will focus primarily on the assessment of long-term health outcomes among Oklahoma City bombing survivors.

## Methods

### Selection of Study Participants

Study participants were selected non-randomly from the IPS registry. Only persons 18 years of age and older were included in the study. The study sample was comprised of two groups and the study was conducted in two phases. Phase 1 study participants (n = 402) included persons who had signed a consent form in 1995 giving IPS permission to contact them for future studies. Phase 1 participants were contacted between Oct. 1, 1996, and Sept. 30, 1997. Phase 2 study participants (n = 512) included persons in the OSDH registry who had not previously signed consent forms. Phase 2 participants were contacted between Oct. 1, 1997, and Sept. 30, 1998.

### Study Instrument

A telephone interview questionnaire was developed; it included questions about long-term health conditions, functional status changes, employment changes, quality of life changes, health care services utilization, medical costs, and payment source. Questions included symptoms of PTSD as described in the Diagnostic and Statistical Manual (DSM IV),<sup>11</sup> hearing and balance disorders, and chronic pain. Questions about emotional outcomes were adapted from a Gallup telephone survey administered in the Oklahoma City and Indianapolis areas following the bombing.<sup>12</sup> Additionally, the instrument included the Heath Status Questionnaire (HSQ-12), a 12-question instrument to assess current health status.<sup>13</sup> The telephone interview questionnaire was pilot-tested among survivors, edited, and finalized. Scripts for interviewers were included in the instrument. The telephone interviews required 20 to 45 minutes to complete depending on the extent of injuries (i.e., interviews for severely injured persons required more time to complete because of the amount of injury description required).

### Study Protocol

Prior to the inception of this study, approval of the OSDH Institutional Review Board was obtained. Persons who had previously consented to be contacted in 1995 (Phase 1 partici-

Table 1. Frequency of Patient Treatment Status by Location at Time of Bombing\*

| Location at Time of Bombing | Hospitalized (n=60) | Emergency Departments (n=170) | Treated by Private Physicians (n=136) | Uninjured Not Treated (n=128) | Total (n=494) |
|-----------------------------|---------------------|-------------------------------|---------------------------------------|-------------------------------|---------------|
| Murroh                      | 38 (63%)            | 52 (31%)                      | 32 (24%)                              | 19 (15%)                      | 141 (29%)     |
| YMCA                        | 2 (3%)              | 11 (6%)                       | 7 (5%)                                | 7 (5%)                        | 27 (5%)       |
| Water Resources             | 5 (8%)              | 15 (9%)                       | 13 (10%)                              | 12 (9%)                       | 45 (9%)       |
| Journal Record              | 11 (18%)            | 24 (14%)                      | 52 (38%)                              | 57 (45%)                      | 144 (29%)     |
| Regency Tower               | 0                   | 8 (5%)                        | 4 (3%)                                | 13 (10%)                      | 25 (5%)       |
| Other buildings             | 3 (5%)              | 46 (27%)                      | 19 (14%)                              | 18 (14%)                      | 86 (17%)      |
| Outdoors                    | 1 (2%)              | 7 (4%)                        | 3 (2%)                                | 0                             | 11 (2%)       |
| In Vehicles                 | 0                   | 7 (4%)                        | 6 (4%)                                | 2 (2%)                        | 15 (3%)       |

\* Includes 494 respondents.

pants) were mailed letters describing the study and notifying them that they would be contacted to schedule a telephone interview. Persons who had not previously consented to be contacted (Phase 2 participants) were mailed notification letters with enclosed consent forms requesting their participation. After a signed consent form was obtained, individuals were contacted by telephone to schedule an interview. Interviews were conducted by telephone with the exception of five (1%) that were conducted in person.

Current mailing addresses and telephone numbers of persons who had moved, changed employment, or relocated, and mailing addresses and telephone numbers not found in the registry were found using telephone directories, Internet directories, and the last known employer. At least three attempts by mail or telephone were made to establish initial contact with persons. After consent forms were received, numerous attempts were made to contact respondents.

Prior to the implementation of the study, a network of agencies and organizations providing services to bombing survivors was established through Oklahoma's Secretary of Health and Human Services. Agencies agreed to provide services to survivors referred by OSDH during the conduct of the study. Agencies that agreed to provide services included: University of Oklahoma School of Medicine Department of Psychiatry; the Survivor's Clearing House Fund; Project Heartland and the Oklahoma Department of Mental Health; Community Counseling Center; and the American Red Cross. During the interview, participants were asked if there were any services that they needed but had not been able to access. Interviewers made referrals with the participant's permission.

The data collected in the telephone interviews were entered in Microsoft ACCESS 97

software.<sup>14</sup> Analysis was conducted using Epi Info.<sup>15</sup> The Pearson chi-square and, when expected cell values were 5 or less, Yates corrected chi-square analyses were used to detect statistically significant differences. Total cost and total number of physician visits were estimated using the following method. The midpoint of each category was multiplied by the number of responses in that category and the results totaled. Average costs were calculated by dividing the total by the total number of responses. A range for total costs was calculated using the lowest and the highest value in the cost category.

## Results

A total of 914 direct survivors of the blast 18 years of age and older were eligible for the study. Of these, 494 (54%) persons were interviewed, 49 (5%) persons refused to be interviewed, 11 (1.2%) persons had died since the bombing, nine (1%) persons reported that they had not been in the bombing or were rescuers, and 351 (38%) persons did not respond, could not be contacted, or could not be located. The participation rate of the 402 persons who had previously given consent to be contacted in 1995 (88%) was more than three times greater than the participation rate among the 512 persons who had not previously consented to be contacted (27%). Sixty-one percent of persons interviewed were female and the average age of respondents was 45 years of age (range 21-91 years).

Ninety-two percent (453/494) of respondents reported that they had been injured in the bombing (included minor smoke and/or dust inhalation and hearing injuries). Injury rates did not vary by gender. Thirteen percent of injured persons sustained injuries serious enough to require hospitalization, 68 percent had been

**Table 2. Newly Diagnosed or Treated Medical Conditions Since the Bombing by Patient Treatment Status, Oklahoma City Bombing Survivors**

| Condition Reported                   | Patient Treatment Status |         |  |         |   |         |                                     |         |  |         |
|--------------------------------------|--------------------------|---------|--|---------|---|---------|-------------------------------------|---------|--|---------|
|                                      | Hospitalized<br>(n=60)   |         | Treated & Released<br>at ED<br>(n=170) |         | Treated by Private<br>Physicians<br>(n=136) |         | Uninjured/Not<br>Treated<br>(n=128) |         | Total Number<br>Interviewed<br>(n=494) |         |
|                                      | Number                   | Percent | Number                                 | Percent | Number                                      | Percent | Number                              | Percent | Number                                 | Percent |
| Auditory problem <sup>1</sup>        | 29                       | 48%     | 49                                     | 29%     | 67  | 49%     | 11                                  | 9%      | 156                                    | 32%     |
| Anxiety <sup>2</sup>                 | 33                       | 55%     | 52                                     | 31%     | 41  | 29%     | 13                                  | 10%     | 137                                    | 28%     |
| Depression <sup>3</sup>              | 32                       | 53%     | 50                                     | 30%     | 35  | 26%     | 17                                  | 13%     | 134                                    | 27%     |
| Head/brain injury <sup>4</sup>       | 28                       | 47%     | 32                                     | 19%     | 11  | 8%      |                                     |         | 71                                     | 14%     |
| Impaired vision <sup>5</sup>         | 26                       | 43%     | 12                                     | 7%      | 8   | 6%      | 3                                   | 2%      | 49                                     | 10%     |
| Asthma/bronchitis                    | 1                        | 2%      | 11                                     | 6%      | 8   | 6%      | 5                                   | 4%      | 25                                     | 5%      |
| Other Problems                       |                          |         |  |         |   |         |                                     |         |  |         |
| Back/Neck and<br>Orthopedic Problems | 6                        | 10%     | 21                                     | 13%     | 20  | 15%     | 4                                   | 3%      | 51                                     | 10%     |
| High Blood Pressure                  | 4                        | 7%      | 5                                      | 3%      | 13  | 10%     | 5                                   | 4%      | 27                                     | 5%      |
| PTSD                                 | 6                        | 10%     | 6                                      | 4%      | 9   | 7%      | 1                                   | 1%      | 22                                     | 4%      |
| Headache/Sinus<br>Problems           | 2                        | 3%      | 8                                      | 5%      | 2   | 1%      | 2                                   | 2%      | 14                                     | 3%      |
| Infection                            | 3                        | 5%      | 2                                      | 1%      | 4   | 3%      | 4                                   | 3%      | 13                                     | 3%      |
| TMJ                                  | 5                        | 8%      | 6                                      | 4%      |   |         |                                     |         | 11                                     | 2%      |
| GI Problems                          | 1                        | 2%      | 5                                      | 3%      | 3   | 2%      | 1                                   | 1%      | 10                                     | 2%      |
| Metabolic Problems                   | 1                        | 2%      | 6                                      | 4%      | 5   | 4%      | 1                                   | 1%      | 13                                     | 3%      |
| Breathing/Lung<br>Problems           | 2                        | 3%      | 1                                      | 1%      | 2   | 1%      | 1                                   | 1%      | 6                                      | 1%      |
| Heart Disease                        | 1                        | 2%      | 1                                      | 1%      | 1   | 1%      | 3                                   | 2%      | 6                                      | 1%      |
| High Cholesterol                     | 1                        | 2%      |  |         | 3   | 2%      |                                     |         | 5                                      | 1%      |
| Cancer                               |                          |         | 2                                      | 1%      | 1   | 1%      |                                     |         | 4                                      | <1%     |
| Allergy                              |                          |         |  |         | 2   | 1%      |                                     |         | 3                                      | <1%     |
| Cerebral Vascular<br>Disease         | 1                        | 2%      | 1                                      | 1%      |   |         |                                     |         | 2                                      | <1%     |
| Nerve Damage                         |                          |         |  |         | 1   | 1%      |                                     |         | 2                                      | <1%     |

1. Rate among hospitalized significantly higher than treated & released,  $p=.006$ , and uninjured/not treated,  $p<.0001$ .

2. Rate among hospitalized significantly higher than treated & released,  $p=.001$ , treated by private physician,  $p=.0004$ , and uninjured/not treated,  $p<.0001$ .

3. Rate among hospitalized significantly higher than treated & released,  $p=.001$ , treated by private physician,  $p=.0001$ , and uninjured/not treated,  $p<.0001$ .

4. Rate among hospitalized significantly higher than treated & released,  $p<.0001$ , treated by private physician,  $p<.0001$ .

5. Rate among hospitalized significantly higher than treated & released,  $p<.0001$ , treated by private physician,  $p<.0001$ , and uninjured/not treated,  $p<.0001$ .

treated as outpatients in a hospital emergency department or physician's office or clinic, and 19 percent of persons reporting injuries had not been treated by a medical professional. The majority (72%) of persons interviewed had been occupants of the most heavily damaged buildings at the time of the bombing including Murrah (29%), Journal Record (29%), Water Resources (9%), and YMCA (5%) (Table 1).

Certain characteristics of persons who were not interviewed could be determined using the baseline data in the OSDH registry. The average age of persons not interviewed was similar to the study population (mean = 43 years, range 18 - 91 years) and the gender distribution was significantly less female (49%,  $\chi^2 = 12.39$ ,  $df = 1$ ,  $p = .0004$ ). A significantly higher proportion of persons interviewed had been hospitalized (13%) compared to those not interviewed (3%),

( $\chi^2 = 35.36$ ,  $df = 1$ ,  $p < .0001$ ).

Respondents were queried about their general health status using the HSQ-12. Seventy-nine percent of respondents perceived their current health status as "excellent," "very good," or "good" while 21 percent perceived their current health status as "fair" or "poor." There were no significant differences between males and females. The proportion of persons rating their health status as "fair" or "poor" was significantly higher among persons who had been hospitalized (31%) than among persons who had been treated by private physicians (17%) and persons not treated or uninjured (13%) ( $\chi^2 = 4.58$ ,  $df = 1$ ,  $p = .03$  and  $\chi^2 = 7.73$ ,  $df = 1$ ,  $p = .005$ , respectively). Additionally, the proportion of persons treated and released in an emergency department who rated their health status as "fair" or "poor" (25%) was significantly higher

Table 3. Symptoms Reported by Oklahoma City Bombing Survivors at Any Time Since the Bombing by Patient Treatment Status

| Symptom Reported   | Patient Treatment Status |         |  |         |   |         |                                     |         |                                       |         |
|--|--------------------------|---------|--|---------|---|---------|-------------------------------------|---------|---------------------------------------|---------|
|  | Hospitalized<br>(n=60)   |         | Treated & Released<br>at ED<br>(n=170) |         | Treated by Private<br>Physicians<br>(n=136) |         | Uninjured/Not<br>Treated<br>(n=128) |         | Total Reporting<br>Symptom<br>(n=494) |         |
|  | Number                   | Percent | Number                                 | Percent | Number                                      | Percent | Number                              | Percent | Number                                | Percent |
| *Jumpy or easily startled <sup>1</sup>                     | 42                       | 70%     | 128                                    | 75%     | 98  | 72%     | 80                                  | 63%     | 348                                   | 70%     |
| *Recurring distressful<br>thoughts of bombing <sup>2</sup> | 38                       | 63%     | 106                                    | 63%     | 86  | 63%     | 65                                  | 51%     | 295                                   | 60%     |
| *Difficulty concentrating <sup>3</sup>                     | 46                       | 77%     | 102                                    | 60%     | 76  | 55%     | 51                                  | 40%     | 275                                   | 56%     |
| *Trouble sleeping <sup>4</sup>                             | 40                       | 67%     | 101                                    | 60%     | 70  | 51%     | 51                                  | 40%     | 262                                   | 53%     |
| Poor memory  | 42                       | 70%     | 90                                     | 53%     | 72  | 52%     | 38                                  | 31%     | 242                                   | 49%     |
| *Disturbing dreams <sup>5</sup>                            | 34                       | 57%     | 91                                     | 54%     | 67  | 49%     | 40                                  | 31%     | 232                                   | 47%     |
| Ringing/roaring in ears                                    | 31                       | 52%     | 89                                     | 52%     | 62  | 45%     | 35                                  | 27%     | 217                                   | 44%     |
| Feeling stressed   | 29                       | 48%     | 67                                     | 39%     | 69  | 50%     | 37                                  | 28%     | 202                                   | 41%     |
| Trouble hearing  | 29                       | 48%     | 76                                     | 45%     | 69  | 50%     | 22                                  | 17%     | 196                                   | 40%     |
| *Hopelessness  | 26                       | 43%     | 66                                     | 39%     | 49  | 35%     | 34                                  | 26%     | 173                                   | 35%     |
| Feeling of isolation                                       | 30                       | 50%     | 56                                     | 33%     | 46  | 34%     | 35                                  | 27%     | 167                                   | 34%     |
| Dizzy/lightheaded  | 35                       | 58%     | 68                                     | 40%     | 45  | 33%     | 18                                  | 14%     | 166                                   | 34%     |
| Difficulty making choices                                  | 31                       | 52%     | 61                                     | 36%     | 50  | 37%     | 23                                  | 18%     | 165                                   | 33%     |
| Chronic pain   | 43                       | 72%     | 64                                     | 38%     | 32  | 23%     | 10                                  | 8%      | 149                                   | 30%     |
| *Trouble with relationships <sup>6</sup>                   | 25                       | 42%     | 52                                     | 31%     | 41  | 29%     | 21                                  | 17%     | 139                                   | 28%     |
| *Difficulty controlling anger <sup>7</sup>                 | 27                       | 45%     | 48                                     | 28%     | 39  | 29%     | 22                                  | 17%     | 136                                   | 28%     |
| Frequent headaches   | 18                       | 30%     | 64                                     | 38%     | 31  | 22%     | 15                                  | 12%     | 128                                   | 26%     |
| Trouble breathing/<br>catching your breath                 | 16                       | 27%     | 47                                     | 28%     | 36  | 26%     | 11                                  | 8%      | 110                                   | 22%     |
| Alcohol or drug use  | 4                        | 7%      | 13                                     | 8%      | 14  | 10%     | 5                                   | 4%      | 36                                    | 7%      |

\* Symptom of PTSD.

1. Rate among injured (hospitalized, treated and released, and treated by private physician combined) significantly higher than uninjured/not treated,  $p=.039$ .

2. Rate among injured (hospitalized, treated and released, and treated by private physician combined) significantly higher than uninjured/not treated,  $p=.014$ .

3. Rate among hospitalized significantly higher than treated and released ( $p=.02$ ); treated by private physician ( $p=.004$ ); and uninjured/not treated ( $p<.0001$ ).

4. Rate among hospitalized significantly higher than treated by private physician ( $p=.039$ ); and uninjured/not treated ( $p=.0006$ ).

5. Rate among injured (hospitalized, treated and released, and treated by private physician combined) significantly higher than uninjured/not treated,  $p<.0001$ .

6. Rate among injured (hospitalized, treated and released, and treated by private physician combined) significantly higher than uninjured/not treated,  $p=.001$ .

7. Rate among hospitalized significantly higher than treated and released ( $p=.02$ ); treated by private physician ( $p=.026$ ); and uninjured/not treated ( $p<.0001$ ).

than persons who were not treated or uninjured (13%) ( $\chi^2 = 6.57$ ,  $df = 1$ ,  $p = .01$ ). There were no significant differences in health status ratings between persons who had been hospitalized and persons who had been treated and released in emergency departments (Fig. 1).

Persons were asked if they had been diagnosed with or treated for asthma/bronchitis, head or brain injury, depression, anxiety, hearing problems, impaired vision, or other medical conditions since the bombing and before the bombing. If the condition had been diagnosed or treated before and since the bombing, they were asked if the condition had worsened. If the condition had been diagnosed since the bombing but not before the bombing, they were asked if the condition had resolved. Of persons interviewed, 325 (66%) reported one or more newly diagnosed or treated medical conditions since the bombing. The most common conditions included hearing problems, anxiety, depression,

head or brain injuries, impaired vision, and orthopedic problems (Table 2). Twenty-four percent of conditions newly diagnosed or treated since the bombing had resolved at the time of the interview. Persons who had more serious injuries (i.e., hospitalized) reported higher rates of impaired hearing and vision, anxiety, depression, and head/brain injuries than persons in other patient treatment categories. The frequency of anxiety diagnosis among females (32%) was significantly higher than that for males (22%) ( $\chi^2 = 5.90$ ,  $df = 1$ ,  $p = .015$ ).

Additionally, 248 (50%) persons reported one or more pre-existing medical conditions (i.e., conditions diagnosed or treated before and since the bombing). The majority (62%) of these conditions had worsened since the bombing. The most frequently reported conditions that had worsened since the bombing were depression (26%), asthma/bronchitis (22%), impaired vision (17%), anxiety (16%),

back/neck and orthopedic problems (13%), hearing problems (13%), and head/brain injuries (7%).

Table 3 shows rates of 19 new symptoms experienced since the bombing including symptoms of depression, anxiety, PTSD, and acoustic trauma experienced at any time since the bombing. Overall, the most frequently reported new symptoms experienced since the bombing were “being jumpy or easily startled,” “having recurring or distressful thoughts of the bombing,” “difficulty concentrating,” and “trouble sleeping” (Table 3). Twenty-one percent of symptoms experienced since the bombing had resolved at the time of interview. Among those who had been hospitalized with bombing injuries, the most frequently reported symptoms were “difficulty concentrating” (77%), “chronic pain” (72%), “poor memory” (70%) and “being jumpy or easily startled” (70%). Chronic pain was reported almost twice as often by persons who had been hospitalized than by persons who had been treated and released in emergency departments, three times more often than persons treated by private physicians, and nine times more often than uninjured/not treated persons. Alcohol/drug use was the least frequently reported symptom within all patient treatment categories. Overall, as treatment level increased, higher rates of symptoms were reported. Persons who had been hospitalized reported an average of 10 symptoms per person; persons treated in emergency rooms or by private physicians reported an average of nine and eight symptoms per person, respectively; and persons who were not treated or uninjured reported an average of five symptoms per person.

Eighty-two percent (403/494) of persons interviewed utilized one or more follow-up health care services for conditions related to the bombing. The most frequently utilized services among all persons interviewed were psychological counseling services, audiology, physical therapy, and vision care (Table 4). Persons who had been hospitalized utilized more services than persons in all other categories. Orthotics/prosthetics and home health were utilized only by persons who had been hospitalized. The frequency of dental services utilization among persons who had been hospitalized (43%) was more than four times higher than for persons treated in emergency departments or by private physicians. The frequency of vision services utilization among persons who had been hospitalized was nearly four times higher than for persons who had been treated in emergency

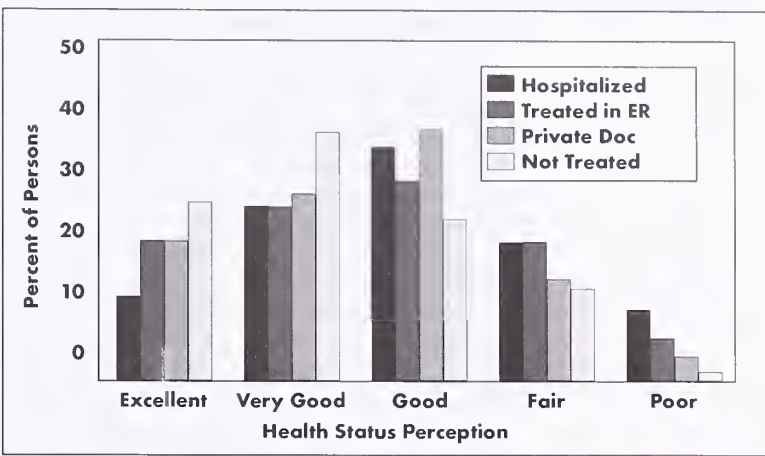


Figure 1. Health Perception\* of Survivors by Patient Treatment Status  
Oklahoma City Bombing Follow-up Study

\* Utilizing the HSQ-12

Table 4. Health Services Utilized by Oklahoma City Bombing Survivors by Patient Treatment Status

| Health Services                       | Patient Treatment Status |         |                          |         |                    |         |                       |         |                         |         |
|---------------------------------------|--------------------------|---------|--------------------------|---------|--------------------|---------|-----------------------|---------|-------------------------|---------|
|                                       | Hospitalized             |         | Treated & Released in ER |         | Private Physicians |         | Uninjured/Not Treated |         | Total Services Utilized |         |
|                                       | Number                   | Percent | Number                   | Percent | Number             | Percent | Number                | Percent | Number                  | Percent |
| Psychological counseling <sup>1</sup> | 9                        | 82%     | 98                       | 82%     | 98                 | 71%     | 95                    | 52%     | 310                     | 63%     |
| Audiologist <sup>2</sup>              | 43                       | 72%     | 76                       | 45%     | 83                 | 61%     | 37                    | 29%     | 239                     | 48%     |
| Physical therapy                      | 42                       | 70%     | 35                       | 21%     | 27                 | 20%     | 2                     | 2%      | 106                     | 21%     |
| Vision services                       | 31                       | 52%     | 24                       | 14%     | 19                 | 14%     | 6                     | 5%      | 80                      | 16%     |
| Family counseling                     | 16                       | 27%     | 22                       | 13%     | 16                 | 12%     | 10                    | 8%      | 64                      | 13%     |
| Dental services                       | 26                       | 43%     | 17                       | 10%     | 12                 | 9%      | 2                     | 2%      | 57                      | 12%     |
| Specialized mobility equipment        | 18                       | 30%     | 5                        | 3%      | 1                  | <1%     |                       |         | 24                      | 5%      |
| Occupational therapy                  | 12                       | 20%     | 4                        | 2%      | 1                  | <1%     |                       |         | 17                      | 3%      |
| Home health                           | 13                       | 22%     |                          |         |                    |         |                       |         | 13                      | 3%      |
| Alcohol or drug treatment             |                          |         | 5                        | 3%      | 3                  | 2%      | 3                     | 2%      | 11                      | 2%      |
| Orthotics/prosthetics                 | 8                        | 13%     |                          |         |                    |         |                       |         | 8                       | 2%      |
| Other                                 | 10                       | 17%     | 20                       | 12%     | 18                 | 13%     | 6                     | 5%      | 54                      | 11%     |

1. Rate among hospitalized significantly higher than treated and released,  $p = .001$ , and uninjured/not treated,  $p = .0001$   
2. Rate among hospitalized significantly higher than treated and released,  $p = .0003$ , and uninjured/not treated,  $p < .0001$

rooms or by private physicians. Among all persons interviewed, 47 percent reported one to five physician visits for physical problems related to the bombing, 27 percent of persons reported six to 20 physician visits, 16 percent reported more than 20 physician visits, and 9 percent had never seen a physician for physical problems related to the bombing. A total number of 3,590 physician visits for physical problems was estimated.

Nearly one-half (49%) of respondents sustained auditory injuries that were either reported in the original study or in the follow-up interview. Of these, 63 percent reported short-term or long-

term hearing loss, 33 percent "ringing in ears" (tinnitus), 9 percent equilibrium or balance problems, and 6 percent suffered tympanic membrane rupture. Of 242 respondents who sustained auditory injuries according to our records, 58 percent reported during the follow-up interview that they had been diagnosed or treated for auditory problems since the bombing.

Ninety-three percent of persons interviewed had health insurance. Total medical costs associated with the bombing were estimated at \$5.7 million (average cost per person \$16,000), \$3.5 million among persons who had been hospitalized, \$1.2 million among persons treated in emergency departments, \$700,000 among treated by private physicians, and \$289,500 by persons not treated or uninjured. Cost range was estimated at \$4 to \$7 million.

Twenty-four percent of persons interviewed reported changes in their activities of daily living (ADLs). Among persons with changes in ADLs, problems with walking were reported by 70 percent of persons, followed by difficulty with household chores (68%), working with arms and hands (61%), driving a vehicle (48%), and dressing and undressing (38%). Sixty percent of persons reported that they participated in the same number of leisure activities outside the home such as going to the movies, sports, and restaurants, 29 percent reported that they participated in more leisure activities, and 10 percent reported that they participated in fewer leisure activities since the bombing. Similarly, 63 percent reported that the number of visits with family and friends outside the home had not changed, 25 percent had more visits with family and friends, and 12 percent had fewer visits with family and friends since the bombing. Fifty-six persons (11%) reported a change in marital status since the bombing including divorce or separation (15), marriage (36), and the death of a spouse (5). Among persons whose marital status had not changed, 67 percent were married, 13 percent were divorced, 16 percent were single, and 3 percent were widowed. Sixty-seven (14%) persons who had been employed at the time of the bombing had changed their employment status; 55 percent (37) were unemployed, 24 percent (16) were on workers' compensation or medical disability, and 21 percent (14) had taken early or regularly scheduled retirement.

At the time of the interview, 27 percent of persons requested assistance and referrals for one or more additional services including coun-

seling services (57% of those requesting services), hearing testing (36%), financial assistance for medical expenses and other needs (24%), and additional medical services (12%). Twenty-four percent of insured persons requested additional services while 60 percent (21/35) of uninsured persons requested additional services ( $\chi^2 = 21.67$ ,  $df = 1$ ,  $p < .0001$ ). Requests for referrals did not differ across patient treatment categories. Persons who had been located outdoors or in vehicles at the time of the bombing ( $n = 26$ ) had significantly higher rates of referrals for counseling services (31%, Yates corrected  $\chi^2 = 4.38$ ,  $df = 1$ ,  $p = .04$ ), hearing testing (38%, Yates corrected  $\chi^2 = 23.72$ ,  $df = 1$ ,  $p < .0001$ ), and financial assistance (23%, Yates corrected  $\chi^2 = 9.02$ ,  $df = 1$ ,  $p = .003$ ) than persons who were located in buildings at the time of the bombing.

## Discussion

The findings of this report suggests that substantial numbers of the Oklahoma City bombing survivors experienced long-term emotional and physical outcomes and increased need for health care services associated with bombing-related outcomes. The most common problems associated with exposure to the bombing were auditory damage, anxiety, depression, and PTSD symptoms. Almost two-thirds of survivors utilized psychological counseling and nearly one-half obtained audiology services.

Few similarities were identified between survivors of the Oklahoma City bombing and other populations referenced in the literature. Blocker, Blocker, and Graham reported that 33 percent of Texas City disaster survivors surveyed suffered tympanic membrane rupture (other auditory damage was not assessed). In comparison, only 3 percent of Oklahoma City bombing survivors surveyed had suffered tympanic membrane ruptures. In Texas City, 8 percent of survivors were diagnosed with psychoneuroses in the nine-year period following the disaster. Of these, 84 percent were diagnosed with anxiety disorders and 8 percent were diagnosed with depression. In Oklahoma City, during the three-year follow-up period, rates of anxiety and depression among Oklahoma City bombing survivors were higher. Some differences in the two rates could have resulted from differences in criteria for psychological assessment between 1956 and the present or differences in psychological constructs studied. The differences could have resulted from a true tem-

poral relationship between exposure and outcome (i.e., exposure-related anxiety and depression may have decreased over time between the three-year time period studied in Oklahoma City and the nine years studied in Texas City).

Findings related to psychiatric symptoms were more consistent with other literature. Abenheim, Dab, and Salmi reported a relationship between injury severity and rates of PTSD (but not depression) among severely injured survivors of terrorist attacks in France. Similarly, rates of PTSD symptoms reported by Oklahoma City bombing survivors rose as injury severity increased. However, the symptoms of "being jumpy or easily startled" and "having recurring distressful thoughts of the bombing" were not significantly different across injury severity categories.

There were limitations in the methods of this study. The results were obtained primarily from self-reported data. Severity of injury was measured by patient treatment level. The long-term medical diagnoses and treatments reported by respondents were not validated. However, acute bombing injuries reported by respondents in the interviews were validated when a source of medical information was known. We were able to document 87 percent of the self-reported injuries. Additionally, the rates of specific diagnoses such as auditory problems, anxiety, depression, head/brain injuries, impaired vision and asthma and bronchitis may have been overestimated because the interview format prompted respondents for each specific diagnosis. For the same reason, other important medical diagnoses may have been under-reported because the interview was formatted to assess "other" medical diagnoses in an open-ended question.

Persons who had previously consented to be contacted were more likely to be interviewed than persons who had not previously consented, thereby introducing self-selection bias. Additionally, females, persons who had been hospitalized, were more likely to be interviewed and occupants of the most heavily damaged buildings.

The study design was further limited to internal comparisons (i.e., comparisons across injury exposure levels). The expected rates of conditions and symptoms among the general population cannot be determined because an external comparison group was not surveyed and age-adjusted population estimates have not been included. Using internal comparisons alone, the data strongly suggests that persons injured, particularly those seriously injured (i.e. hospitalized), had increased occurrence of hearing damage, depres-

sion, anxiety, PTSD symptoms, and increased utilization of health care services for bombing-related conditions.

Lifetime prevalence rates for major depressive disorders differ by gender, 10 to 25 percent for females and 5 to 12 percent for males.<sup>11</sup> Depression diagnoses reported by persons in this study were not significantly higher among females (28%) than among males (26%). Anxiety diagnoses, however, were significantly higher among females (32%) than among males (22%) ( $\chi^2 = 5.90$ ,  $df = 1$ ,  $p = .015$ ). No gender differences were detected in the rates of auditory damage, head/brain injuries, asthma/bronchitis, vision impairment, or other reported diagnoses.

It is beyond the scope of this study to assess the prevalence of PTSD among survivors interviewed. Prevalence rates of PTSD among at-risk populations (i.e., combat veterans, victims of volcanic eruptions, victims of criminal violence) have been estimated at 3 to 58 percent.<sup>11</sup> Among survivors of terrorist attacks in France, PTSD was present in 30.7 percent of severely injured survivors, 8.3 percent of moderately injured survivors, and 10.5 percent of uninjured survivors.<sup>10</sup> While the data presented in this report demonstrates that PTSD symptoms were present in a large proportion of the study population, the functional impact of these symptoms as measured by the proportion of persons reporting fewer leisure activities outside the home (10%) and persons reporting fewer visits with family and friends (12%) was far less than those reporting symptoms. Further, medically diagnosed or treated PTSD was reported by only 4 percent of persons interviewed. The data suggests that although exposed persons frequently experience multiple symptoms of PTSD following a terrorist bombing, symptoms do not necessarily predict avoidance behavior or fully diagnosed PTSD.

Overall, social outcomes were positive or unchanged for the majority of persons interviewed. Ninety percent of persons continued to engage in the same or more social activities than they had before the bombing and only 3 percent of respondents had been divorced or separated which is 95 percent lower than the Oklahoma divorce rate<sup>16</sup> (59%) and 93 percent lower than that for the nation<sup>17</sup> (45%). Among persons who experienced changes in ADLs, 13 percent engaged in fewer leisure activities outside the home and 15 percent had fewer visits with family and friends. The frequencies of excellent, very good, good, fair, and poor health perception ratings (general health perception, HSQ-12) among

all respondents were similar to those reported by Bowling and Windsor in a household survey of 1910 adults in Great Britain<sup>18</sup> and health perception ratings among persons who had been hospitalized were similar to ratings for persons with longstanding illnesses.

This summary is intended as a descriptive report of long-term health outcomes identified among Oklahoma City bombing survivors. The data show a direct relationship between injury severity and the frequency of bombing-related medical and psychological outcomes and needed services. This study indicates that continued medical and psychological evaluation of survivors for known exposure-related outcomes should follow a terrorist bombing for an extended period of time. Symptoms of PTSD, hearing damage, depression, anxiety, vision impairment, and other outcomes should be assessed over time by medical practitioners delivering care to survivors.

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## After the Bombing: Public Scenarios and the Construction of Meaning

James R. Allen, MD, MPH



Photo courtesy of the Oklahoma City Fire Department

An old story tells of three baseball umpires who sat down for a beer after a game. "Strikes or balls — I call them the way they are," said the first. "Strikes or balls — I call them the way I see them," added the second. "Strikes or balls — they ain't nothin' 'til I call them," concluded the third.

This paper explores the stories we have constructed about the Oklahoma City bombing, and how these constructions influence what we can ask, what we perceive, what we understand, and consequently what we consider appropriate responses.

Since the bombing of the Murrah Building, the people of Oklahoma City, including the survivors, the families of victims, the rescuers, and the bystanders, have had to incorporate this unexpected event into their lives. It is the purpose of this paper to examine the stories we have told ourselves and others about the bombing, and to examine some of the effects these stories have had on what questions we ask, what we conclude and what we consider appropriate responses.

The cognitive psychologist Jerome Bruner<sup>1</sup> has suggested that there are two ways of knowing

the world: the paradigmatic and the narrative. The former is the realm of traditional science and logical argument and is exemplified by most of the articles in this issue of the *Journal*. Its goal is truth. The latter is the realm of our intentions, hopes, stories, and lived experiences. Its goal is believability. This is the area the present paper addresses.

Each of us has a story of his or her life. In telling our stories, we solidify our memories and our identities, and give coherence to our lives. Indeed, there is something about describing one's experiences and telling one's personal story that makes it seem meaningful. However, our personal life narratives are lived within the context of larger public scenarios.

### Scenarios of Meaning

Previous public scenarios were suddenly disrupted for many people on April 19, 1995. A wide variety of scenarios have since arisen to explain the bombing. Twelve seem to have been of special importance. Even when their validity is questionable, they still affect people's perceptions, the questions they can ask, the answers they find, and what they do. Although these scenarios overlap, they fall into two broad types: those explaining etiology and those explaining current events.

### A) Scenarios of Etiology

#### 1. Mid-Eastern Terrorism

In the first few hours after the bombing, many assumed it was the work of Mid-Eastern terrorists, presumably in retaliation for the Gulf War and other US activities in the Mideast. In her *Chicago Tribune* column, for example, Georgeanne Geyer wrote, "It has every single earmark of the Islamic car bombers of the Middle East."<sup>2</sup> In accordance with this scenario, one Mid-Eastern man was arrested on his way to England.

## 2. Violence of the Far Right

When a Caucasian US citizen was arrested near Perry, Oklahoma, the threat of widespread attacks by militias and various right-wing political and paramilitary groups quickly gained credence. This interpretation seemed substantiated by the facts that the bombing occurred on the anniversaries of the destruction of the Branch Davidian Compound in Waco, Texas, an alleged planned assault on Ruby Ridge, and the Battle of Lexington. Some local judges, it turned out, had even received summons to Freeman's courts.

Public and media surprise over the existence of right-wing violence reflected their lack of awareness of the rise of the Patriot movement and, within it, of American militias. In reality, documentation of these threats had fallen primarily to private human-rights organizations such as the Southern Center for Poverty Law. Awareness and public disapproval of right-wing anti-government rhetoric became immediately evident after the bombing, however, and seems to have been a major factor in the de-escalation of the vitriolic exhortations of a number of radio-show hosts.

## 3. McVeigh's Final Statement

An interesting variant of the right-wing scenario was McVeigh's final statement at his trial. While it would be inappropriate, and even unethical, to speculate on the personal dynamics behind this, his declaration that the government is the "great teacher" does invite speculation. It invites distrust in the government and perhaps invites the very governmental behavior he protested.

## 4. The Apocalypse

A series of influential scenarios have been elaborated around the apocalyptic belief of a vast cosmic struggle between the forces of Good and the forces of Evil. Originally derived from Near-Eastern prophecies concerning the ultimate fate of the world, this scenario was elaborated by sectarian groups such as the Essenes, and later codified in the Revelations of John of Patmos. In his visions, he saw the Messiah appearing amid a series of catastrophic events. Ultimately, the Messiah destroys the Antichrist and establishes a new Heaven and a new earth.

In his statement to the Capitol press corps at 5:30 p.m., April 19, President Clinton aligned himself with the forces of Good:

"The bombing in Oklahoma City...was an act of cowardice and it was evil. The United States will not tolerate it. And I will not allow the people of this country to be intimidated by evil cowards." Later in his eulogy at the memorial service,

he said, "As St. Paul admonished us, 'Let us not be overcome by evil, but overcome evil with good.'"

This particular scenario is widespread; perhaps, it is especially available here in the Bible Belt. One survivor who worked in the Murrah Building, Caren Cook, seemed to speak for many when she stated: "Many lives of precious people were sacrificed to show the world that grace and love overcome evil."<sup>3</sup> However, even George Bush justified the Gulf War as an effort to bring "a new world order"<sup>4</sup> — a term he did not define but one which he emphasized, presumably, in a quite different way than did presidential candidate Pat Buchanan a little later.

Individual variations of this theme seem to have contributed to at least some of the survivor guilt which has been common. Some rescuers and family members believed they had failed to "fight the good fight" because they were unable to save relatives or children.

This scenario has also been influential in the deliberations of a number of disgruntled political groups. They differ only in whom they consider "good guys" and whom, "bad." Some equate the US government and its various agencies with the Seven-headed Dragon of the Apocalypse. This or related beliefs can be discerned in the various philosophies of many militia, survivalist, and Patriot groups as well as in the common-law philosophy of the Montana Freeman. Along this line, *Soldier of Fortune* magazine makes a major distinction between a mercenary and a soldier of fortune. The former is a freelance soldier serving merely for pay. Soldiers of fortune, in contrast, "fight the good fight" against the evils of tyranny and international conspiracy.<sup>5,6</sup>

On whichever side one believes oneself to be, it must be comforting and strengthening to enfold one's individual life into some larger, cosmic drama.

## B) Scenarios of Current Events

### 1. Invulnerability:

At first, there was disbelief that something like this could happen here in Oklahoma, the heartland. When Channel 9 television reporter Randy Renner emotionally noted, "This is something that happens someplace else...this is not supposed to happen in places like Oklahoma," the cameras quickly cut away, but he was only one of the first whose sense of inviolability was shaken. Somewhat later, when a local arts group offered Israel an exhibit of their work with victims, the offer was refused on the grounds that the Israelis dealt with terrorists everyday!

The media may have played up reports to produce this perception of violated invulnerability in the heartland. Of his experience with them, an emergency room physician at the hospital closest to the explosion noted, "They prompted me to say I was outraged. That I couldn't believe it happened in Oklahoma City. But why not in Oklahoma City? It could happen anywhere."<sup>7</sup>

## **2. A Deal with God**

Some people had firmly believed that if they were "good," God would take care of them and protect them. It is as if they had a contract with God and He broke it! While this could be considered a rather crooked and one-way child-parent transaction rather presumptuously imposed on God, many of these people experienced a crisis of faith. Some have ended like Job, believing there must be a reason, even if it were beyond their understanding. Others have lost their basic trust in people and in a benign universe.

## **3. Tribulation and Resiliency**

A third scenario has been the depiction of the whole event as a testimonial to Oklahomans' resilience. While the bombing may well have created a link in the minds of many between Oklahoma and tragedy, it is unlikely that Oklahoma City will be remembered like Dallas or Waco. What may be recalled is the spirit of community that dominated the aftermath. The Jewish communities in Tulsa and Oklahoma City, for example, donated generously for the rebuilding of Christian churches. And this is not the first time Oklahomans have shown such resilience. Even during the depths of the Depression, it is pointed out, the people of Oklahoma City taxed themselves and passed what was the bond issue of the century to build a city hall, a courthouse, and a municipal auditorium. People did not riot or loot after the explosion. However, the streets were filled with onlookers and the area patrolled.

A variant of this theme was expounded by Attorney General Reno at the Inaugural Symposium of the Oklahoma Memorial Institute on October 25, 1998. Referring to the church service held the Sunday after the bombing, she observed that the people of Oklahoma City had showed both that they would not give in to terrorism, and that they would continue to function and solve problems within the rule of law.

## **4. The Family**

A fourth scenario has been grounded in the metaphor of the family. This was perhaps most clearly enunciated by Vice President Gore in his

address televised on the first anniversary of the bombing. He compared the response of the citizens of Oklahoma City to the healthy response of a supportive family. True, people had pitched in to help, and there had been no violence or looting. The shifting nature of this metaphor becomes apparent, however, when it is recalled that survivors of another tragedy also came together that day. In Waco, Texas, survivors of the Branch Davidians gathered and remembered that they too had once been a family.

## **5. Victimization**

The post-bombing situation was ripe for great drama triangles of victims, helpers, and persecutors. While such drama is an integral part of the structure of apocalyptic scenarios, it was also played out at more mundane levels.

Drama requires a victim. However, a victim needs a persecutor and/or a rescuer, for each of these roles is dependent on the other. Almost as soon as the first smoke curled up from the Murrah Building, people knew who the victims were, and soon they knew who the rescuers were, but there was no known villain — until a Mid-Eastern man was found to complete the drama triangle. Unfortunately, once a drama triangle is established, roles may change suddenly, no matter the characteristics of the people involved.<sup>8</sup>

### **a) Helpers**

It is difficult to be a helper without someone to help, and for mental health workers there just were not enough victims to go around. This led to squabbling, fighting, and turning others into villains or persecutors. These problems were exacerbated by the initial chaos and confusion.

At times, would-be helpers became angry because the people who came to them were not the "proper victims" but rather the "ordinary" homeless, mentally ill, or drug-addicted who showed up for shelter and food. One mental health worker who had come from a nearby city was horrified when her first "victim" turned out to be a runaway youth who wanted 75 cents to buy a condom — and then the loan of her car to go cruising! Thus, some would-be helpers experienced their roles as switched to that of victims, and the people who came for help may have experienced them more as persecutory and depriving than as helping.

### **b) Victims and revictimization**

The picture of a firefighter gently cradling the broken and bleeding body of an infant, Baylee Almon, became an icon for the death of 168 men, women,

and children. It graced the covers of *Time*, *Life*, and *Newsweek*. For the amateur photographer who took the picture, it won a Pulitzer Prize. However, for Baylee's mother, the effects were devastating. "Now that I look back, that picture is probably the worst thing that has ever happened to me besides losing Baylee." She noted that the pictures of the other children killed in the day care center depicted them alive, but Baylee's picture shows her dead. "It's not like they never even think that she was once alive. I've taken a lot of grief from the parents because Baylee is getting more attention than their children," she added.<sup>9</sup> Even worse, she had to hire an attorney to discourage companies from selling items bearing her daughter's likeness. "Nobody stopped to think this was my daughter. Everybody was just doing something they could make money off of." Two years later, following the sentencing of McVeigh, she was to object to the use of the picture by a political cartoonist who turned it into a statement against the death penalty.

Groups of helpers rushed in from all over the country. Twelve thousand three hundred and eighty-four workers, including eleven urban search and rescue teams, were involved in the rescue.<sup>10</sup> Had this been a biological or radiation disaster, the damage they might have suffered would have been phenomenal. Despite widespread altruism, some seem to have come just to look, some for publicity, some to do research or to get grants. Some seem to have come to debrief themselves or to reenact some former trauma. This theme of exploitation, direct or accidental — for money, political aspirations or for research purposes — became a source of resentment and suspicion. One company even published a beefcake calendar of rescuers, with only a few cents earmarked for the survivors. Public events which were held to help the community grieve and to come to terms with the trauma may have been helpful in preventing later complications; yet in the eyes of some, these activities were suspect.

Some family members of the dead later felt angry at the conduct of the McVeigh trial: that no charge of murder was brought on behalf of their particular loved one, that mistakes had been made about where three bodies were found, at the choice of trial site, at the use of non-Oklahoman jurors and judge; and at the limited size of the courtroom in Denver. In part, this may be explained as displaced anger. Rejecting help may be an expression of the need to deny a sense of helplessness. However, it also fits with a sense of being a victim in a drama triangle — and sometimes the recipients of their anger felt that they were the true victims.

## **6. Psychological Frameworks: Pathologizing and Normalizing**

Many mental health workers expected — and often received — grants to treat large numbers of people suffering from posttraumatic stress disorder. When the expected patients did not arrive, this was frequently interpreted as resistance and a manifestation of the avoidance which forms part of the diagnostic criteria for the DSM-IV diagnosis of Posttraumatic Stress Disorder.

An alternative conceptualization however also emerged, a conceptualization that did not emphasize pathology and treatment, but rather the restoration of human relatedness. This has become important in deliberations about the nature of appropriate help for the survivors.

## **7. Sacred Land**

The story of the bombing now seems to be becoming a narrative in its own right. It is a marker event which encourages people to contrast how life was before with how it is now. For the multitudes of visitors who have to come to the bombing site, leaving messages and small furry animals on its fence, the Murrah building has become a site of pilgrimage. Some even talk of "sacred ground."

## **8. Terrorism of the Future**

Some conceptualize the Oklahoma bombing as the first example of a new type of terrorism: on U.S. soil, aimed at "soft targets" and the work of individuals, not a state.<sup>11</sup> For them, the next century is likely to be "the age of terrorism" manifested in cyberterrorism as well as in weapons of mass destruction. This scenario is now widespread in popular culture as evidenced by the current movie *The Siege*.

## **Consequences of Some of the Scenarios**

What people consider appropriate responses to the bombing depends on which scenario has the most influence in their thinking. For example, people who understand the tragedy in terms of a struggle between Good and Evil will consider helpful those behaviors which are on the side of righteousness and which seem to punish evil. Thus, they are likely to emphasize the need to punish or to isolate the perpetrators. This position is usually taken with more aggressiveness if they also believe in the need to confront the perpetrators or to be an eyewitness to retribution. Some were deeply offended when McVeigh did not seem to repent. For those more influenced by the family or the heartland resilience scenarios, such

demands were likely to seem somewhat irrelevant. In the area of mental health, the consequences of pathologizing or normalizing scenarios led to very different approaches to help. While mental health workers generally worked within the framework of their traditional training as exemplified by Project Heartland under the State Department of Mental Health,<sup>10</sup> an alternative way of dealing with the trauma also emerged.

Six months after the bombing, the Oklahoma Arts Institute extended an open invitation to survivors and family members of bombing victims to meet together with professional artists at their rural retreat at Quartz Mountain. One hundred and twenty-seven people showed up. Together, they explored the healing properties of art — dance, painting, poetry, short story, group song, basket-weaving, and the making of memory boxes. The goal was not to do therapy, but to help people transform their experiences and to give them significance.<sup>12</sup> Working side by side, they shared stories of those they lost and of lives lost. As one 10-year-old boy who had lost his father wrote:

*"See the people dying, hear the babies crying,  
and I mourn.*

*Want to wake up so I pinch myself.*

*And sadly enough, it is far worse than a  
dream."*<sup>13</sup>

One group of teenagers produced a group painting based on the *Red Badge of Courage*. In it, each participant produced his own badge, a kind of badge of survival. In this concrete manner, they transformed their personal tragedies into something they felt significant, connecting their personal experiences to a more cosmic theme. Their individual badges became, as the instructor, Tim Rollins, said "mandalas of joy."<sup>13</sup> Of their experience, the following lines adopted by their instructor from the *Red Badge of Courage* seem especially descriptive:

*"Art is the enemy of death*

*Art is the way when there is no way out*

*Art is hope made manifest and I am a witness"*<sup>13</sup>

In the dance group, each participant took certain static postures embodying his or her experiences. Then, with the help of a choreographer, they connected these static poses into a larger dance, a kind of personal celebration of the flow and continuation of life and also an expression of the self as it flows through time. A basket-weaving group under the aegis of a Native American "national treasure" helped them weave their experiences into larger creations of beauty. All the time the participants wove, she told stories, a kind of Native American Milton Erickson. The

philosophy of the leader of the poetry group was not to talk directly of the tragedy but, as in Gestalt therapy, to let emerge into foreground what was most pressing. These participants, who had never previously written poetry produced what their leader, a Pulitzer prize winner,<sup>14</sup> claimed to be as good as poetry written by students in his MFA writing programs.

This experience at Quartz Mountain allowed survivors to meet with other survivors, to integrate what had happened to them, to elaborate a larger story and then to move on. Most importantly, these artistic processes facilitated externalization, the transformation of loss into significance and meaning, and the integration of the tragedy into the participants' life stories. It gave them permission to mourn and to get on with their lives, to connect with the health in themselves, to use their own resources and those of the community, and to integrate back into their communities,<sup>15</sup> all without defining themselves as "mental patients." Rather, their experience was conceptualized as an experience that could happen to anyone. It also gave them a marker event which offered a rationale for positive changes they made. The poetry and art groups continued to meet monthly long after the weekend, and have recently published an anthology of their work.<sup>3</sup> Not without reason, the whole weekend was called a "Celebration of the Spirit."

Similar processes have been evident in the lives of some children whose peers had been killed. Not a few mothers of child survivors have noted the value of their children putting together a memory book of photographs of their former school and friends, and of their meeting with other nursery-school mates who had survived. One three year old who had previously been in the nursery school that was blown up but had moved to another nursery just a few weeks before the bombing repeatedly made buildings of sand, labeled them "my school" and then stomped down the front half. After meeting with former schoolmates at a Barney party, he settled down, and stopped his repetitive play and his nightmares. It seems that having seen others who were still alive in a safe setting and with a predictable routine, he too could move on.

This alternative approach to dealing with trauma would seem a useful addition to more traditional efforts and a useful intervention to explore more explicitly in other disasters.

### Summary

In both our folk psychology and mental health practice, we adhere to the modernist view that a



Photo courtesy of the Oklahoma Air National Guard

crisis is something that an individual has. A crisis is either something that happens to people or which people bring on themselves because of character pathology. On the other hand, postmodern theorists<sup>16,17</sup> now draw our attention to how processes of interaction provide opportunities for certain characterizations to emerge and dissipate.<sup>16,18</sup> Both the conceptualization of an event as a crisis and the scenarios of how it is best understood arise within a community and emerge out of the communal construction of meaning.

In this process in Oklahoma City, bystanders, politicians, pilgrims and news media played a role of great significance. Whether local or from afar, they became a community of observers who interacted with one another and looked to one another for verification as to what counted as a crisis and what behavior was appropriate. Lindy<sup>19</sup> has observed that traumatized individuals are often surrounded quickly by a small network of trusted people who serve to buffer and protect them and who define what is helpful and what constitutes further trauma. Here, in Oklahoma, however, a wider public defined the event as a crisis, elaborated on it, and have gradually trans-

formed it into almost mythic proportions, a process now exemplified in the construction of the Oklahoma City National Monument. However, they have also endorsed diverse other scenarios, not all of which have facilitated appropriate grieving, repair of life-disruption, or moving on. All, however, seem to have given a sense of meaning to the event.

In this rich matrix, some survivors and their families have felt helped. Others have felt exploited. Still others have wanted to forget the whole thing and to avoid anything that reminded them of it. Of the would-be helpers, some felt unjustly rejected and unappreciated. Others felt appreciated, useful, and even enriched.<sup>8</sup> However, a true legacy of the bombing may well be the metalogue it can precipitate and advance about the relationship between individuals and society, and especially the relationship between our individual life-stories and larger public scenarios, and the effects these scenarios have on the questions we can ask, what we can perceive, and what solutions we can create. J

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## Population Effects of the Bombing of Oklahoma City

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**Background and Purpose:** The explosion at the Murrah Federal Building in Oklahoma City on April 19, 1995, affected many members of the community as well as direct victims. Our goal was to measure the exposure and effects among the general population.

**Methods:** We conducted surveys of the Oklahoma City metropolitan area and a control area to measure exposure and impact, primarily stress and psychological distress.

**Results:** Of the adults in the Oklahoma City MSA, 61.5 percent (58.5 percent to 64.5 percent with 95 percent confidence) reported experiencing at least one direct result of the bombing. In population terms, about 433 thousand adults (between 412 thousand and 457 thousand, with 95 percent confidence) were exposed to one or more of the consequences of the bombing. Oklahomans reported higher rates (about double) of increased alcohol use, smoking more or starting smoking. They reported more stress (about double), psychological distress (about double), post-traumatic stress-disorder components, and intrusive thoughts (double) related to the bombing than in the control area. Oklahomans also reported higher rates of seeking help for their stress or taking steps to reduce stress. The differences persisted into 1996, more than a year after the bombing.

**Conclusion:** The exposure to the bombing was widespread, including more than half the adults in the metropolitan area surrounding Oklahoma City. The psychological effects were high and, while decreasing, persisted more than a year after the bombing. Primary care practitioners should screen their patients, who may normally not be considered victims, for exposure to the effects of a terrorist disaster for an extended period of time.



Photo courtesy of Oklahoma Air National Guard

### Introduction

A disaster of the magnitude of the bomb explosion at the Murrah Federal Building in Oklahoma City on April 19, 1995, affects many members of the community as well as direct victims. In the aftermath of the explosion, we conducted two surveys of the Oklahoma City metropolitan area to measure the impact of the bombing on the general population. We interviewed residents in the Indianapolis, Indiana metropolitan area for comparison. Surveys were done in the fall of 1995, a few months after the bombing, and in 1996, about a year later, to measure both short term and medium term impacts of the bombing. Our objective was to measure the effects of the bombing on the larger community, particularly psychological and emotional effects.

Post-disaster surveys have been conducted previously, including hurricanes,<sup>1,2</sup> earthquakes,<sup>3,4</sup> nuclear reactors,<sup>5,6</sup> and dams,<sup>7</sup> but none of them have focused on a population rather than direct victims nor have any included a control group.

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**Table 1. Rates of experiencing "a lot of stress," or "moderate stress" or either for the Oklahoma City and Indianapolis MSAs in 1995 and 1996.**

|                 | Metropolitan Area |              |
|-----------------|-------------------|--------------|
|                 | Oklahoma City     | Indianapolis |
|                 | <b>1995</b>       |              |
| A lot of Stress | 13.7%             | 5.8%         |
| Moderate Stress | 42.5%             | 30.1%        |
| Total           | 56.2%             | 35.9%        |
|                 | <b>1996</b>       |              |
| A lot of Stress | 3.2%              | 2.8%         |
| Moderate Stress | 19.9%             | 10.3%        |
| Total           | 23.1%             | 13.1%        |

There are several strengths of a comparative survey to assess the impact of this bombing. The target population is a valuable comparison to the direct victims of the bombing, both injured and displaced persons. Information from the control group, a different geographical area, can be used to measure more subtle or indirect effects, as they must be for people who are not direct victims.

### Methods

#### Exposed and Control Populations

The target population was the adult (aged 18 or over) population of 704,000 in the six county Oklahoma Metropolitan Statistical Area.<sup>8</sup> The Indianapolis Metropolitan Statistical Area was selected as a control area with an adult population of 921,000 in nine counties. (Tulsa, with an adult population of about 519,000 in five counties, was judged not acceptable because it is close to Oklahoma City and has close social connections.) Oklahoma City was the 42nd largest MSA in 1990 and had grown 11.4 percent since 1980, while Indianapolis was 31st and had grown 7.1 percent. The proportion of all minorities was 19 percent in Oklahoma City, including 10 percent African-American and 5 percent American Indian, with the remainder nearly all Hispanic. The proportion of minorities was 15 percent in Indianapolis, nearly all African-American. The unemployment rate in Oklahoma City was 5.4 percent and the average annual pay was \$21,000 while Indianapolis had an unemployment rate of 4.2 percent and annual average pay of \$23,300. Overall, Indianapolis was judged a satisfactory control area among those relatively small number of metropolitan areas similar in size to Oklahoma City.

#### Sampling and Interviews

Unlike such natural disasters as floods, hurricanes, or tornadoes, the physical structures of the Oklahoma City metropolitan area were essentially intact, so a telephone survey was feasible.

A sample of phone numbers was created by randomly selecting the first eight digits of a telephone number, the area code and the three digit exchange plus the next two digits of the phone number, known as a "block," from among all such blocks in the Oklahoma City and Indianapolis MSAs which contained at least one listed residential number. The last two numbers were randomly selected to obtain a full, ten-digit, telephone number. Within each contacted household, one resident was selected randomly to be interviewed.

Final estimates were weighted to account for unequal selection probabilities of both households and individual respondents. Weights were adjusted where a household had more than one residential phone line (these households could have been contacted more than once, though this is rare) and where a random selection was made among several adults living in the household. Weights were also adjusted to reflect the overall proportions of men and women, different age groups, Hispanics/Nonhispanics, and Whites/Nonwhites in the general population. Thus, each respondent was weighted to reflect his or her chance of selection and his or her demographic characteristics.

In 1995, interviews started in July and ended in August. All interviews were done by 10 interviewers at one location of The Gallup Organization (Lincoln, Nebraska) who were selected specifically for these interviews. There were a total of 1,010 respondents in the Oklahoma City MSA and 750 in the Indianapolis MSA with response rates of 46 percent in both areas. The proportions of men and women interviewed were 43 percent men and 57 percent women in Oklahoma and 46 percent men and 54 percent women in Indianapolis. The average ages were similar, 42.8 years (SD = 16.8 years) in Oklahoma City and 42.8 years (SD = 15.2 years) in Indianapolis. The proportions of each race in Oklahoma City were: White, 85.0 percent; African-American, 7.1 percent; and all others, including American Indians and refusals, 7.9 percent. The proportions of each race in Indianapolis were White, 88.5 percent; African-American, 9.2 percent; and all others, including refusals, 2.3 percent.

In 1996, interviews started in September and ended in November. Interviewers were the same as in 1995. There were a total of 1,020 respondents in the Oklahoma City MSA and 402 in the Indianapolis MSA with response rates of 40 percent and 37 percent respectively. In Oklahoma City, the proportion of men interviewed was 40 percent and of women, 60 percent, while in Indianapolis the proportion of men was 48 per-

cent and of women, 52 percent. The average ages were 45.7 years (SD = 16.8 years) in Oklahoma and 44.8 years (SD = 16.6 years) in Indiana. The proportions of each race in Oklahoma City were: White, 84.5 percent; African-American, 9.6 percent; American Indian, 3.2 percent, and all others, including refusals, 2.7 percent. The proportions of each race in Indianapolis were white, 89.8 percent; African-American, 6.7 percent; American Indian, 0.5 percent, and all others, including refusals, 3.0 percent.

Estimates of rates or averages derived from random samples of 1,000 have a maximum error range of  $\pm 3.1$  percent at a 95 percent level of confidence. This may be interpreted as the maximum range within which the results could be expected to vary in 95 out of 100 repeated samples during the same time period, using the same questionnaire, interviewers, and sampling procedures. Estimates from random samples of 750 and 400 would be expected to vary no more than  $\pm 3.6$  percent and 4.9 percent, respectively.

**Interview Questions**

An interview was developed for the survey that measured exposure to the bombing and its direct effects—including injury, damage to home, personal involvement, and involvement of friends or of family—and effects such as psychological distress and symptoms of post-traumatic stress disorder (PTSD) as well as demographic and other characteristics. The questionnaire was revised in 1996 pursuant to our experience in 1995. A number of questions were removed, particularly exposure, and items from standard scales on depression and post-traumatic stress disorder were included.

**Measures  
Exposure**

We report rates of exposure to the bombing measured in Oklahoma City in 1995 by whether any of the following eight consequences of the bombing happened to a respondent: personally injured by the bombing, was off work for any length of time, had his or her home damaged, had any family member injured or killed, had any other household member injured or killed, knew anyone else who was injured or killed, attended a funeral service or memorial service for an individual, or attended any other ceremonies for victims.

**Drinking and Smoking**

In 1995 we asked about both drinking and smoking and repeated the questions about drinking in 1996. Respondents were asked if they had had at

| Table 2. Rates of Respondents Who Reported They Sought Treatment, Took Steps to Reduce Stress, or Did Either One for the Oklahoma City and Indianapolis MSA in 1995 and 1996 |                   |              |
|--|-------------------|--------------|
|  | Metropolitan Area |              |
|  | Oklahoma City     | Indianapolis |
|  | 1995              |              |
| Sought Help  | 8.5%              | 2.5%         |
| Reduced Stress   | 23.4%             | 15.7%        |
| Either of Above  | 26.9%             | 17.5%        |
|  | 1996              |              |
| Sought Help  | 8.5%              | 4.2%         |
| Reduced Stress   | 28.1%             | 14.1%        |
| Either of Above  | 31.0%             | 17.6%        |

least one alcoholic drink since the bombing. If they had, they were asked if they had alcoholic beverages more often than usual since the bombing. We report increased drinking as a rate for the entire population. In 1995, we asked if people had either started smoking since the bombing (asked only of nonsmokers) or if they had smoked more cigarettes since the bombing (asked only of people who had smoked in the month before the bombing). We report the rates for the separate populations, nonsmokers or smokers.

**Stress**

In 1995, we asked two questions about overall stress. The first question was a personal rating about how much stress was experienced since the bombing: a lot, a moderate amount, relatively little, or almost none. The second question was comparative: whether the respondent had experienced more stress than before the bombing, about the same stress, or less stress. Only the first question was repeated in 1996. We report rates for self-reported stress in both years.

**Stress and Exposure**

For 1995, the two stress items were scaled numerically and added together to obtain a single scale. Overall stress was scaled from 0 (almost none) to 3 (a lot). Comparative stress was scaled as: -1 (less stress), 0 (the same), and +1 (more stress). The total of the two items ranged from -1 to 4. We also computed the number of exposure items (see list above) experienced by each respondent in Oklahoma City. We report the linear relationship between stress and exposure using regression analysis and correlation.

**Seeking Help**

We asked whether respondents had sought any help for any personal or emotional problems since the bombing. We also asked if, other than

**Table 3. Rates for Sudden Reminders, Intrusive Thoughts, or Dreams or Nightmares About the Bombing, or Avoiding Situations About the Bombing are Shown for Oklahoma City and Indianapolis in 1995. Rates for Dreams or Nightmares About the Bombing or Avoiding Situations About the Bombing are Shown for Oklahoma City and Indianapolis in 1996.**

|                      | Metropolitan Area |              |
|----------------------|-------------------|--------------|
|                      | Oklahoma City     | Indianapolis |
|                      | 1995              |              |
| Suddenly Reminded    | 70.4%             | 45.6%        |
| Unintended Thoughts  | 68.0%             | 46.4%        |
| Dreams or Nightmares | 14.1%             | 6.4%         |
| Avoided Situations   | 30.7%             | 15.3%        |
|                      | 1996              |              |
| Suddenly Reminded    | NA                | NA           |
| Unintended Thoughts  | NA                | NA           |
| Dreams or Nightmares | 5.4%              | 2.2%         |
| Avoided Situations   | 13.9%             | 7.0%         |

seeking help, respondents had consciously taken any steps to reduce stress. We asked both questions in 1995 and 1996. We report the rates of seeking help and of taking steps to reduce stress. We also computed whether or not a respondent sought help or took steps to reduce stress and we report the proportion who took either of these actions.

### **Psychological Distress**

Respondents were asked to evaluate seven items related to psychological distress. These were phrased "Since the bombing, how often do you feel 1) so sad that nothing could cheer you up, 2) nervous, 3) restless or fidgety, 4) hopeless, 5) that everything was an effort, 6) worthless, and 7) angry." Answers were all of the time, most of the time, some of the time, a little of the time, or none of the time. For each response of all, most, or some of the time, respondents were also asked "Would you say you have felt [the given item] more often than before the bombing, less often than before the bombing, or about the same as before the bombing?" We totaled the number of items that a respondent thought had occurred all, most, or some of the time. We report the rates of respondents by these totals.

### **Components of Post-Traumatic Stress Disorder**

We asked six items related to post-traumatic stress disorder in 1995. These were phrased "Since the bombing, how often 1) have your emotions been kind of numb, 2) did you lose interest in things you used to enjoy, 3) were you jumpy or easily startled, 4) have you felt easily annoyed or irritated, 5) did you lose your temper,

6) did you have trouble sleeping." Five responses were offered for each item: never, almost never, sometimes, fairly often, very often. For each item, we also asked "Would you say you have felt or behaved this way more often or less often than before the bombing or about the same as before the bombing?" We report the rates of respondents who endorsed any item and who endorsed at least four of the six items.

### **Intrusion**

We asked four questions about reminders of the bombing in 1995: 1) have things you have seen or heard suddenly reminded you of the bombing, 2) have you thought about the bombing when you did not mean to, 3) have you had dreams or nightmares about the bombing, and 4) have you avoided situations that remind you of the bombing. All four questions asked for answers of: never, almost never, sometimes, fairly often, or very often. The questions about dreams or nightmares and avoiding situations were repeated in 1996. We report the rates of sometimes, fairly often, or very often for each item.

### **Results**

#### **Exposure**

Of the adults in the Oklahoma City MSA, 61.5 percent (58.5 percent to 64.5 percent with 95 percent confidence) reported experiencing at least one direct result of the bombing. In population terms, about 433 thousand adults (between 412 thousand and 457 thousand with 95 percent confidence) were exposed to one or more of the consequences of the bombing. A large proportion, 38.5 percent, reported knowing someone who was injured or killed in the explosion and 19.0 percent reported attending one or more funerals for victims of the bombing. Memorial services of other kinds were common in Oklahoma and 39.2 percent of respondents participated in them. Such services were held nationwide and on national television and 17.4 percent of respondents in Indianapolis reported participating. Eleven percent of workers (67 percent of respondents) reported they were unable to work due to the bombing. Small numbers of respondents reported the following items: 1 percent being personally injured by the bombing; 1 percent having his or her home damaged; 3 percent having a family member injured or killed; 4 percent having another household member injured or killed.

#### **Drinking and Smoking**

Oklahoma respondents reported a higher rate of

0.9 percent in Indianapolis, respectively. In Oklahoma, smokers reported a 29.2 percent rate of smoking more than usual, compared with 14.7 percent in Indianapolis. In Oklahoma, 1.6 percent of nonsmokers reported starting smoking, compared with 0.4 percent in Indianapolis.

### **Stress**

Rates for the two highest responses — a lot of stress and moderate stress — are shown for both cities for both survey years in Table 1. Levels for both categories were higher in Oklahoma City than in Indianapolis both years. In 1995 the Oklahoma City rate for a lot of stress was over twice that of Indianapolis, and the rate for moderate or a lot of stress in Oklahoma City was 1.55 times that of Indianapolis. The rates declined from 1995 to 1996 leaving a total rate in Oklahoma City almost twice that of Indianapolis.

### **Relationship Between Stress and Exposure**

There was a strong linear relationship between the stress score and the total number of exposure items out of eight possible, with a correlation of .34 ( $se = .028$ ). Regression analysis (unweighted) of stress on exposure yielded an intercept of 1.167 ( $se = .055$ ) and a slope of 0.378 ( $se = .034$ ,  $t = 11.3$ ,  $p < .0001$ ).

### **Seeking Help**

Rates for the seeking help or taking steps to reduce stress are shown for both cities for both survey years in Table 2. In 1995 the rate of seeking treatment in Oklahoma City was over three times the rate in Indianapolis while the rate of taking steps to reduce stress in Oklahoma City was about 1.5 times the rate in Indianapolis. The total increased in Oklahoma City from 1995 to 1996 but was stable in Indianapolis. Seeking treatment and reducing stress in Oklahoma City were both double the rates in Indianapolis.

### **Psychological Distress**

During 1995 in Oklahoma City, 68.0 percent of respondents reported having experienced at least one psychological distress item at least some of the time and 27.8 percent reported experiencing four or more distress items. In Indianapolis, 59.1 percent of respondents reported having experienced at least one distress item at least some of the time and 11.1 percent reported experiencing four or more distress items.

### **Post-Traumatic Stress Disorder**

During 1995 in Oklahoma City, 76.1 percent of respondents reported having experienced at least one PTSD item at least some of the time and 43.1 percent reported experiencing four or more items. In Indianapolis, 62.7 percent of respondents reported having experienced at least one PTSD item at least some of the time and 32.1 percent reported experiencing four or more items.

### **Intrusion**

Rates for the intrusions, reminders of the bombing, are shown for both cities for both survey years in Table 3. Rates for dreams or nightmares or avoiding situations that are reminders in Oklahoma City were double the rates in Indianapolis in both 1995 and 1996. Rates for both items decreased in both areas from 1995 to 1996. The rates for sudden reminders and unintended thoughts were both substantially higher in Oklahoma City than in Indianapolis.

### **Discussion**

The exposure to the bombing was widespread, including well over half the adults in the metropolitan area surrounding Oklahoma City. It is remarkable that contact with the bombing, mostly by knowing direct victims, was so widespread. This strongly suggests that physicians, particularly primary care practitioners, should screen their patients for direct and indirect contacts with disasters, whether caused by terrorists, or natural or man-made but unintentional. The effects of the bombing on peoples' well-being, measured by stress, intrusiveness, and other characteristics, was long-lasting, continuing in significant proportions at least a year beyond the bombing itself. Screening efforts should continue for a similar period, possibly longer.

The behavioral impact of the bombing was substantial. Changes in drinking and smoking habits, both in terms of increased amounts or new use, were higher in Oklahoma City than in Indianapolis. Rates of seeking help for stress or taking other steps to reduce stress were higher in Oklahoma City than in Indianapolis. Behavioral responses to the bombing differed, often substantially.

The psychological impact of the bombing was high across several different measures: distress, PTSD, and intrusive thoughts. Compared with Indianapolis, every measure of psychological impact was higher in Oklahoma City both a few months after the bombing and about a year and a half later.

## Population Effects of the Bombing of Oklahoma City

The availability of a control area was crucial to discovering the effects we have reported. Rates differed between the two metropolitan areas and the changes over time sometimes differed. Without this comparison, significant doubts could be raised about the breadth, strength, or persistence of the effects of the bombing on the whole population.

It is not sufficient to limit our view of the impact of a disaster to the dead and injured. Many others can be affected, compromising their daily lives, often requiring treatment for their changed lives.

### Acknowledgments

The Centers for Disease Control and Prevention contributed to the costs of data collection in 1995 and 1996. Dr. Sara J. Nixon and Dr. Stephanie McFall made valuable contributions to questionnaire development.

### The Authors

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# WORTH REPEATING

## Thank You

Michael Winzenread, MD

I would like to express my deepest appreciation and sincere heartfelt respect for all the members of the Oklahoma County Medical Society and to the medical community both locally and nationally. The tragedy that occurred on April 19, 1995, at the Alfred P. Murrah Federal Building was sudden and massive. The response of all was heroic and showed to the rest of the world the true character and qualities of our citizens, and particularly our medical community.

The heroic and kind acts of the many are too numerous to mention here and have been well documented in both print and electronic media.

The quick action and quick thinking of many prevented even worse suffering and loss of life than had already occurred.

We can never understand the thinking process of individuals or groups of people

who would commit such an evil crime against other human beings, particularly innocent and helpless children. A wanton and destructive act like this could only be accepted for the eventual healing and increased sense of community that we will have. I am certain that the response from our members of the Oklahoma County Medical Society as well as all others including the rescue workers, police department, fire department, local and state politicians, will be held as a model to others that undergo other disasters, hopefully of a natural type and not an unnatural massacre like this was. A heartfelt thanks to all of you who volunteered to care. No matter how insignificant it seemed to you at the time it really did matter. I wish to express gratitude to all of those who helped. To all of the victims and families of victims our most sincere and deepest grief and hope for eventual recovery and healing over the next several months and years.

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Photo courtesy of Oklahoma City Fire Department

## Cooperation Emphasized—Divisiveness Forgotten

Lauranne Harris, MD

Since I felt the ground shake and heard the explosion that heralded the bombing of the Murrah building, I have been exposed to many sights, sounds, emotions and the concrete physical experience of this disaster that I could never have imagined. Certainly for all of us this has been a truly life-changing time. In order to measure the full value of what has transpired I have begun the process of examining the mental "snapshots" preserved in my heart. But they are more than just pictures because they retain the emotion of these individual moments.

There were some times when I seemed to completely experience the entire moment — all thought, emotion and sentiment are clearly connected. There are also other times when I was forced to separate the emotion from the task, as to feel would have kept me from functioning. Now, I go back in my mind and heart, linking the duties and tasks with the feeling. Like many, I have seen the carnage, the physical destruction. But as I assimilate these many images and moments into their place of

meaning in my heart, I see many different expressions of the same thing — LOVE.

For what I have experienced is the way a family reaches out to its members in crisis — with love. Where cooperation is emphasized and divisiveness forgotten. People characterize physicians, nurses, and other health professionals as healers, but what I saw were thousands of healers — each with their special kind of love to give and gifts to share. On our downtown streets and in our hospitals were those who banded and cared for the wounded. There were many who also brought needed supplies, food and equipment. They were not glory-seekers but were "ordinary folks" reaching out to answer a need.

Even as sandwiches, cold drinks and equipment were handed by "ordinary" people to the designated rescue workers at the scene what really was happening was an exchange on a different level. These "ordinary" people did something extraordinary. They said by their actions to the workers and to the victims and their families:

*We are with you.  
Our pain is yours.  
Our joy is yours.  
Our hope is yours.*

Through their touch, their support, their presence and their prayers, they took the burden of the moment from those whose backs and hearts were breaking and shared it.

It is as if one of those deep artesian wells that runs hidden underground has burst into the light in the midst of our city. There seems to be no end in sight to the fountain of love which is showering down upon our city. May we continue to share its power with the world and each other and allow this gift of love to transform our lives. An event as calculated by unimaginable hate to cause terrible destruction has seen a thousand-fold greater good arise like the phoenix from its ashes. We have been given the power to heal. Let us go about our work.

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Duncan Regional Hospital -  
Duncan

Hillcrest Medical Center -  
Tulsa

Institute for Mental Health -  
Oklahoma City

Integris Baptist Medical Center -  
Oklahoma City

Integris Southwest Medical Center -  
Oklahoma City

Jane Phillips Medical Center -  
Bartlesville

Mercy Health Center -  
Oklahoma City

Norman Regional Hospital -  
Norman

St. Anthony Hospital -  
Oklahoma City

Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

**Deaconess Hospital** - Cyndi Nelson - 405-604-4979

|            |                            |          |        |
|------------|----------------------------|----------|--------|
| April 19th | State of the States Health | 6: 30 pm | 1 hour |
|------------|----------------------------|----------|--------|

**Institute for Mental Health** - Teresa Peden - 405-522-3839

|            |                      |         |         |
|------------|----------------------|---------|---------|
| April 23rd | Emergency Psychiatry | 8:30 am | 6 hours |
|------------|----------------------|---------|---------|

**Integris Baptist Medical Center** - Rikki Caraway - 405-949-3284

|                    |   |         |             |
|--------------------|---|---------|-------------|
| April 2, 9, 16, 30 | Tumor Board                                     | 7:00 am | 1 hour each |
| April 12th         | Rhabdomyolysis                                  | 7:00 am | 1 hour      |
| April 19th         | Integrating Medicine,<br>Science and the Spirit | 8:00 am | 3 hours     |
| April 20th         | Treatment of Stage III<br>Lung Cancer           | 7:00 am | 1 hour      |
| April 23rd         | Neumega in Conjunction<br>with Chemotherapy     | 7:00 am | 1 hour      |

**Integris Southwest Medical Center** - Jonathan Stotler - 405-636-7087

|            |  |  |  |
|------------|--|--|--|
| April 7th  | Benefits of Prayer on Healing/Wellness |  |  |
| April 14th | Treatment of Deep Vein Thrombosis      |  |  |
| April 28th | Pain Assessment                        |  |  |

**Jane Phillips Medical Center** - Ronda Riden - 918-331-1467

|            |             |      |        |
|------------|-------------|------|--------|
| April 8th  | Wound Care  | Noon | 1 hour |
| April 29th | Hepatitis C | Noon | 1 hour |

**Mercy Health Center** - Debbie Stanila - 405-752-3806

|                                |   |  |             |
|--------------------------------|---|--|-------------|
| April 1st                      | New Prospective in Management of Craniofacial Anomalies             |  |             |
| April 8th                      | Intensive Managment of Type II Diabetes: New Combination Strategies |  |             |
| April 15th                     | Future of Therapy of Parkinsons Disease                             |  |             |
| April 22nd                     | Surgical Prophylaxis for Deep Vein Thrombosis                       |  |             |
| April 29th                     | Update on the Common Cold   |  |             |
| All programs begin at 12:15 pm |   |  | 1 hour each |

**St. Anthony Hospital** - Sandy Coury - 272-6358

|            |   |         |        |
|------------|---|---------|--------|
| April 12th | Coronary Risk Managment                 | 8:00 am | 1 hour |
| April 15th | Dementia in the Elderly                 | Noon    | 1 hour |
| April 26th | Preventing and<br>Managing Osteoporosis | 8:00 am | 1 hour |

**Irwin Brown Office of Continuing Medical Education** - Letricia Harris - 405-271-2350

|            |   |         |
|------------|---|---------|
| April 13th | PLICO Loss Prevention Seminar - Shawnee | 2 hours |
| April 15th | PLICO Loss Prevention Seminar - Tulsa   | 2 hours |
| April 17th | PLICO Loss Prevention Seminar - Tulsa   | 2 hours |
| April 20th | PLICO Loss Prevention Seminar - Clinton | 2 hours |

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator at 405-843-9571*

# NEWS

## OCVO and OSMA Officers to be Elected

The OCVO Board of Managers will elect officers during the OSMA House of Delegates meeting, April 15-18, 1999. Nine positions are up for election by members of OSMA. The Executive Director and President of OSMA shall also be members of the Board of Managers. The Board of Managers shall have the authority to manage the activities of the OCVO.

In addition to the nine positions with OCVO, several other positions within the OSMA are up for election, including President-Elect, Vice President, and Secretary-Treasurer; Trustees for District I, District IV, District VI, District XI, District XII, and District XIII; AMA Delegates and Alternate Delegates; and PLICO Board of Directors.

## Growth Chart Revised

The growth charts used since 1977 in private pediatric practice and public health clinics are being revised by the National Center for Health Statistics, Centers for Disease Control and Prevention, to provide a better instrument for evaluating the growth status of infants, children, and adolescents in the United States.

Dissemination of the revised charts is scheduled for 1999. These multipurpose charts have received widespread application:

- as a clinical screening tool for health and nutritional status, to identify and classify children as low length or low stature for age; low weight for length, stature or age; or high weight for length, stature or age;
- as an educational tool to illustrate for parents the patterns in their children's size and growth relative to the reference population; and
- as an epidemiological tool in nutritional surveillance programs, to categorize and monitor population trends in physical growth

The charts have also been adapted by the World Health Organization for international use.

To update health professionals on the growth charts, the Oklahoma State Department of Health is presenting a teleconference. *The NEW GROWTH CHARTS: Who, What, Where, When, and How?* will be presented at numerous locations across the state on Tuesday, May 25, 1999, from noon until 4 p.m.

Viewing locations include sites in Ada, Altus, Alva, Antlers, Ardmore, Atoka, Beaver, Checotah, Durant, Enid, Fairview, Guymon, Holdenville, Idabel, Jay, Lawton, Norman, Oklahoma City, Pryor, Sallisaw, Shawnee, Stillwater, Stilwell, Tahlequah, Tulsa, Vinita, Watonga, and Woodward.

To register for the teleconference, call Vera Bouse, Maternal and Child Health Services at the Oklahoma State Department of Health, 405/271-4470, before May 7, 1999.

## OSMA Creates Taskforce to Address State's Declining Health

Oklahoma is the only state that has had a decline in health status since 1990, dropping from a ranking of 27 in 1990 to 44 in 1997, according to an annual ranking by ReliaStar Financial Corporation. This finding was reported in the third annual *State of the State's Health Report* released by the Oklahoma State Board of Health.

In response to this news, the Oklahoma State Medical Association is establishing a special taskforce charged with informing the public about the status of Oklahomans' health and seeking ways to make improvements.

OSMA President Mary Anne McCaffree, MD, and State Board of Health and OSMA taskforce member Gordon Deckert, MD, presented the report and outlined some specific OSMA public health initiatives at a media briefing held March 3rd at the State Capitol.

## Oklahoma Physicians Receive Awards

Three Oklahoma physicians were recognized by the National Kidney Foundation of Oklahoma for their contribution to medicine.

James Wenzl, MD, received the Lifetime Achievement Award in recognition of his 31 years of service to the children of Oklahoma. Donald B. Halverstadt, MD, who performed the first kidney transplant at the University of Oklahoma in 1968, received the 1999 Urologist of the Year Award. Thomas Kenkel, MD, was named the 1999 Nephrologist of the Year.

## IN MEMORIAM

### 1998

|                                   |              |
|-----------------------------------|--------------|
| Robert T. "Tom" Cronk, MD .....   | April 15     |
| Jack Paul Enos, MD .....          | April 19     |
| Paul Arthur Barnett, MD .....     | April 28     |
| Allen B. Eddington, MD .....      | May 20       |
| David C. Ramsey, MD .....         | May 22       |
| William H. Reiff, MD, FACS .....  | May 25       |
| Jerry L. Puls, MD .....           | June 5       |
| James M. Behrman, MD .....        | June 5       |
| Charles N. Talley, MD .....       | June 14      |
| Thomas C. Points, MD, PhD .....   | June 15      |
| Charles M. Cameron, Jr., MD ..... | June 22      |
| Philip G. Tullius, MD .....       | July 4       |
| Louis H. Charney, MD .....        | July 8       |
| Ralph L. Walker, DO .....         | July 11      |
| Brook S. Bowles, MD .....         | July 20      |
| Edwin R. Shapard, MD .....        | July 28      |
| Paul L. Masters, MD .....         | August 6     |
| Douglas D. Leatherman, MD .....   | August 21    |
| Richard E. Carpenter, MD .....    | August 30    |
| Henry J. Freede, MD .....         | September 9  |
| Chester K. Mengel, MD .....       | September 14 |
| Leaford Thornbrough, MD .....     | September 27 |
| Sumner Y. Andelman, MD .....      | October 6    |
| Eric B. Meador, MD .....          | October 10   |
| Vance A. Bradford, MD .....       | October 23   |
| Joseph S. Raff, MD .....          | November 12  |
| Herbert J. Forrest, MD .....      | November 14  |
| Joseph N. Mitchell, MD .....      | December 23  |

### 1999

|                                   |            |
|-----------------------------------|------------|
| Thomas Edward Rhea, MD .....      | January 2  |
| H. Ben Yagol, MD .....            | January 19 |
| Paul Elliott Tietze, MD .....     | January 27 |
| Charles L. Johnson, Jr., MD ..... | February 8 |

## DEATHS



### Paul Elliott Tietze, MD 1950 - 1998

Paul Elliott Tietze, MD, died Jan. 27, 1999. Dr. Tietze was born on Dec. 2, 1950, in Bartlesville. He received his medical degree from the University of Oklahoma in 1978. Dr. Tietze was chairman of the Department of Family Practice at the University of Oklahoma College of Medicine-Tulsa, and Ex-Officio Member of the Physician Manpower Training Commission. He was a member of the American Medical Association and the Oklahoma State Medical Association.



### Charles L. Johnson, Jr., MD 1920 - 1999

Charles L. Johnson, Jr., MD, died Feb. 8, 1999. Dr. Johnson was born March 19, 1919. He received his medical degree at the University of Oklahoma School of Medicine in 1943. He served in the U.S. Navy ranked as a Lieutenant. Dr. Johnson was a member of American College Emergency Physicians, American Medical Association, Southern Medical Association, Surgical Congress, Senior Fellow, American Society Abdominal Surgeons, Arkansas State Medical Association, American Academy of Family Physicians, Arkansas Academy of Family Physicians, and the Oklahoma State Medical Association.

## CLASSIFIEDS

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### SEEKING FACULTY

The Department of Anesthesiology at the University of Oklahoma/Veterans Affairs Medical Center is actively seeking faculty at the Instructor, Assistant Professor, or Associate Professor level, for a position in the Veterans Affairs Medical Center. Candidates should have a commitment to resident education and clinical excellence. An interest in neuroanesthesia a plus. Candidate must be BE/BC and possess an OK State Medical License. Very competitive package offered, in this low cost of living, family oriented region. Interested candidates should send a copy of their CV and the names of three professional referees to: Robin J. Elwood, M.D., Professor and Chairman, Department of Anesthesiology, University of Oklahoma, PO Box 53188, Oklahoma City, OK 73152. Call (405) 271-4351 or FAX (405) 271-8695.

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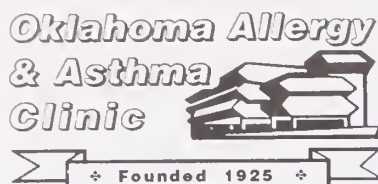
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these findings.

Bylines may contain no more than six (6) names and shall include only those individuals who can attest that they have contributed to the conception and design, or analysis and interpretation of data; and to drafting the article or revising it critically for important intellectual content; and to final approval of the version to be published. Other contributions may be recognized in an acknowledgment.

References are to be listed in the order of their appearance in the article, and in the style used in both the *JOURNAL* and in *JAMA* (author, title, publication, year, volume number, pages). Footnotes, bibliographies, and legends for illustrations should be on separate sheets.

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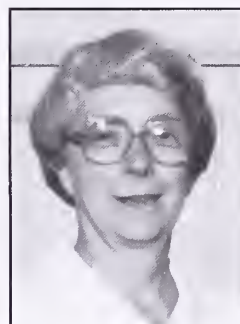
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## **Medicare Claims Must Be Y2K Compliant by April 5**

The Health Care Financing Administration (HCFA) has announced that all Medicare claims—paper and electronic—must meet Y2K specifications by April 5, 1999. Any claim(s) received on or after April 5 that are not Y2K compliant will be returned as “unprocessable.”

Y2K specifications are available on the Internet. For electronic claims, see <http://www.hcfa.gov/medicare/edi/edi3.htm>. For paper claims, see <http://www.hcfa.gov/medicare/edi/edi5.htm>. A Y2K hotline has been provided at 225/216-0711. Physicians may contact the Medicare Customer Service number for Oklahoma at 405/843-9379 with any questions.

## **State Legislation Update**

The Oklahoma State House of Representatives passed HB 1368, “Genetic Research Study Nondisclosure Act,” by Betty Boyd of the House and Ben Brown of the Senate, and HB 1826, “Oklahoma Managed Care External Review Act,” by Boyd and Ted Fisher of the Senate. Both bills are strongly supported by OSMA and now go to the State Senate for consideration.

The House Public Health Committee unanimously passed HB 1443 on peer review, the “Oklahoma Patient Care Quality Improvement Act,” by Betty Boyd.

The House also passed HB 1002, by Jari Askins of the House and Ben Brown of the Senate. HB 1002 is the vehicle that will be used by the legislature to determine distribution of the proceeds of the tobacco settlement. Public health advocates, including the OSMA, want the funds to be used for public health purposes, including tobacco-cessation programs, education and treatment of tobacco-related illness.

## **State to Receive More Money from Tobacco Settlement**

The numbers are in. Attorney General Drew Edmondson announced on March 10 that Oklahoma will receive a \$267.8 million bonus because of its strategic role in the historic litigation and settlement with the tobacco industry. This brings the total amount awarded to Oklahoma to \$2.3 billion over the next 25 years. (*Daily Oklahoman*, March 11)

## **More Physician Volunteerism Recognized**

William S. Harrison, MD, of Chickasha, notified the *Journal* of news about the Access Clinic, which provides free medical care to those in need. Nine physicians work a rotating schedule, volunteering their time and staff to the clinic. They are Drs. Mitch Coppedge, Tom Essex, Joe Franklin, Don Hess, Randall Jenkins, Bill McDoniel, Ron Orr, Nestor Pinaroc and Bruce Storms. The clinic officially opened in January, 1994. (*The Express-Star*, March 7)

## **Stockard Named Outstanding Citizen**

Rex Stockard, MD, was recognized by the Comanche County Sheriff's Department as an Outstanding Citizen for his community volunteer work and acts of philanthropy. The award, given by Sheriff Kenney Stradley, recognizes individuals for their accomplishments and commitment to the community.

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# JOURNAL

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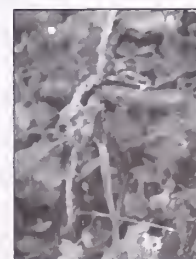
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## Good Pub Bad Pub

A rejuvenated OSMA Council on Public Relations is beginning a new look at the relationship between the people of Oklahoma and the physicians of the Oklahoma State Medical Association. From its beginning OSMA has had awareness of the need for the public to have a positive perception of the physician. But over the years, organized activity on this subject has been, at best, desultory and more often lacking.

Many physicians' complacency regarding the peoples' perceptions may be partially explained by the old cliché: "Everyone loves their own doctor but hates the American Medical Association." The physician, lulled by the patient's "love," is astonished to see the patients "hate" of organized medicine's activity. The physician feels the patient's acceptance in daily practice, and only experiences the patient's rejection when promoting a policy project.

This near-universal ambivalence in the people should not deter OSMA from developing an active program of public relations. Rather, we should keep an awareness of the split in mind when we plan projects or select an action venue.

In today's intense media market, the induction of a positive image, "good pub," may be only a hair's-breadth away from a negative image, "bad pub." And the "good" can be converted to "bad" merely by the personal bias or "spin" of a reporter, station manager or editor. As a group, media writers are probably not more "anti-doctor" than any other coterie, but many journalists have an instinct for controversy. In the daily news, "bad doctor" stories outnumber the "good doctor" reports even while health news is now a daily feature on the TV channels.


Television dominates American culture, although newspapers, magazines, and radio also have major influence. In today's milieu, the electronic and print media probably have more effect on image perception than all other forces combined. Millions of dollars are spent to air medical entertainment shows and investigative medical journalism reports, and these "docudramas" have a major effect on the public's perception of physicians.

We physicians should mount a concerted, long-term program to counter the "bad pub" blitz that the media continually produces. Generating another "Marcus Welby, MD" is neither feasible nor wise, but we can and should develop a coherent OSMA media reaction team.

Knowledgeable and articulate Oklahoma physicians should be immediately available to answer reporter's questions and allegations with positive, authentic, and quotable statements.

A response team with media capabilities is urgently needed by OSMA now to defend the physicians' image. Moreover, once such a team has been recruited, trained and scripted, it could well be the nucleus of an organized effort to restore and remodel the profession's image.

Until that is accomplished, it would be well for physicians to remember that every patient and every day is an opportunity to project a positive physician image and build public relations. "Good pub" is a daily and a life-long project for the physician as well as organized medicine.



Ray V. McIntyre, MD  
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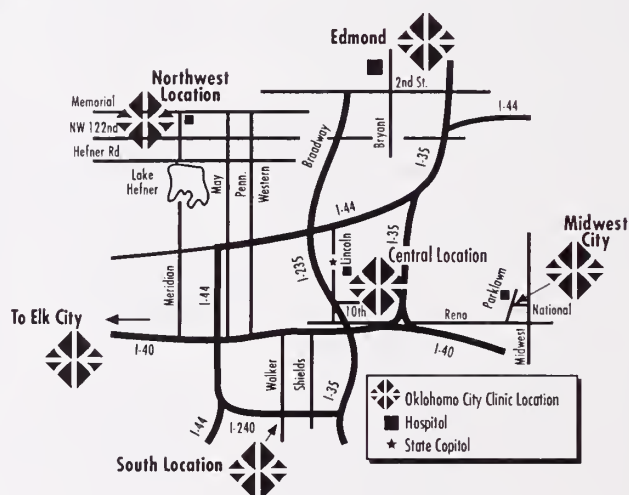
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# PRESIDENT'S PAGE

## Oklahoma is Sick!

The State of the State's Health Report has shown that we rank very poorly in areas such as substance abuse, heart disease, teen pregnancy, infant and maternal health and violent behavior issues. As physicians, we need to be leaders in the fight to help the residents of



Oklahoma—our patients—improve the conditions reflected in these statistics.

Our #1 goal, as set by the OSMA Long-Range Planning Committee, is to "assume a more active and visible role in promoting and improving health education." This is not something that can be solved in one year, and we know that much of the basic problem is related to low income and low education levels. Our legislators and community leaders are also striving to correct these problems, but it will be a long-term effort.

Your Oklahoma State Medical Association, through the Council on Public and Mental Health—and in association with the State Health Department—is laying plans to help Oklahoma physicians do their part in turning this situation around. Already, a special task force has been appointed to decide how we can most effectively carry out a planned, organized effort which will be known as the "Physicians' Campaign for a Healthier Oklahoma."

One area of the campaign that has already been identified is that of helping individual physicians educate their patients, since it is in those local offices where doctor-patient relationships are formed and nurtured. It is also those one-on-one conversations doctors have with their patients that, studies show, have the

greatest potential for changing a patient's health habits.

With the help of our newly restructured Public Relations and Communications Councils we also intend to launch a broad-based public education effort through newspapers, radio, television, speaking engagements, and all other forms of communication that are available to us. An important part of that effort will be carried out through several new programs in our schools to not only improve the health of our young people now, but also to prevent their developing many of the poor health habits we see reflected in our adult population.

Attaining the goals we have set for ourselves will require a great deal of effort from all of us, and I urge each of you to become involved in this ambitious undertaking in some way. I also welcome your suggestions and ideas as we go forward together to improve the health of the people of Oklahoma.

Over the next few years, we must do everything we can to ensure that the state of our state's health improves and that we lead the way in national health statistics rather than finding ourselves at the bottom as we are now.

Sincerely,

A handwritten signature in dark ink that reads "Boyd O. Whitlock MD." The signature is written in a cursive, flowing style.

Boyd O. Whitlock, MD  
OSMA President

P.S. By the time you receive this copy of the *JOURNAL*, the 93rd Annual Meeting will be history. I know it was a good one, and I'll talk more about that next month. See you then!

---

"Our #1 goal...  
is to 'assume  
a more active  
and visible role  
in promoting  
and improving  
health  
education.'"

---

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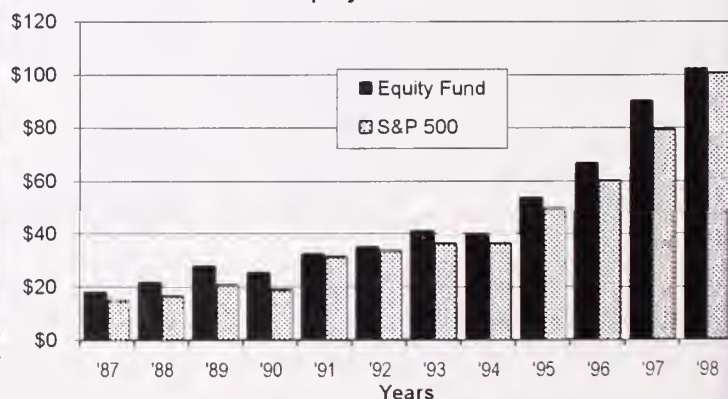
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## Large Ovarian Cellular Fibroma During Pregnancy Mimicking a Lipid Cell Tumor

Dean Ross, MD; Michael A. Gold, MD; Anna E. Sienko, MD; Thomas Toolson, MD; Arthur Schipul, MD

Lipid cell tumors are extremely rare tumors of the ovary which are usually malignant when larger than eight centimeters. Fibromas, on the other hand, are the most common type of benign ovarian solid tumors. Neither one of these tumors are known to be accelerated by the pregnant state.

We report a case of a healthy 15-year-old female who was found to have an ovarian mass during pregnancy. This fibroma weighed more than 3,800 grams and mimicked a lipid cell tumor. Cesarean section and unilateral oophorectomy resulted in a good outcome for both mother and child.

### Introduction

Lipid cell tumors of the ovary are rare with a source estimating only 100 cases in the literature.<sup>1</sup> They arise from the stroma of the ovary and are usually benign unless large.<sup>2</sup> Ovarian fibromas, while also stromal tumors, are very common and almost never malignant.<sup>3</sup> We report a case of a very large ovarian mass found during pregnancy. Unique features to this case led to initial concern for a malignant lipid cell tumor, however, further study determined it to be more consistent with a benign fibroma.

### Case Report

A 15-year-old African-American primagravida female transferred to St. Anthony Family Practice Residency clinic at 28 weeks gestation to receive prenatal care. Previously she had an uneventful prenatal course. Her fundal height was reported consistent with her dates at both nine and 12 weeks, and ultrasound at 17 weeks showed a normal singleton intrauterine preg-

nancy consistent with her dates. The ultrasound report made no mention of her adnexae. Her prenatal lab studies were normal.

On presentation at 28 weeks, the physical exam was notable for a fundal height of 38 cm. Due to the size and dates discrepancy, a repeat scan was ordered. The patient, however, was not compliant. When she returned to the office one week later, a fist-sized ovoid extrauterine mass could also be palpated cranial to the fundus. The patient's blood pressure was 158/108 supine and 128/74 with left lateral decubitus positioning. She was sent for immediate diagnostic ultrasound, revealing a 19 × 17 × 16 cm mass extending from the liver to the spleen and from the xiphoid to the uterus. The mass was solid with a small, central cystic component. It appeared entirely extrauterine. The fetal scan was completely normal. Based on the ultrasound findings, the most likely diagnosis was an ovarian teratoma, followed by thecoma, granulosa cell tumor, and other ovarian neoplasms. The patient's care was transferred to University Hospital where treatment could be coordinated between maternal-fetal medicine and gynecologic oncology.

The following week she was admitted to University Hospital to rule out pre-eclampsia. Her blood pressure was 140/100, she had 1+ pedal edema, and she had 2+ protein on urine dipstick. A subsequent 24-hour urine collection showed 1,062 mg of protein. The patient began to complain of a headache and diffuse abdominal pain, and was given two doses of  $\beta$ -methasone to hasten fetal pulmonary maturity. Due to the worsening symptoms of pre-eclampsia, the decision was made to proceed with delivery at 30 weeks gestation.

Direct correspondence to: Dean Ross, MD, Saint Anthony Hospital Family Practice Residency Program, 608 NW 9, Ste. 1000, Oklahoma City, Okla. 73102.

Table 1.

|                      | Lipid Cell Tumor                       | Cellular Fibroma                       | Cose Report                            |
|----------------------|--|--|--|
| Age                  | Any, but usually 12-50 ya              | Usually > 40 ya, avg = 48 ya           | 15 ya                                  |
| Side                 | Unilateral                             | 90% unilateral                         | Unilateral                             |
| Frequency            | < 0.1%, ~ 100 known cases              | 20% of solid ovarian tumors            | N/A                                    |
| Virilizing           | Usually, about 90%                     | Na                                     | Not apparent                           |
| Growth               | Unknown                                | Extremely slow                         | Presumably fast                        |
| Size                 | 50% < 5 cm                             | < 5% are > 20 cm                       | 22 x 20 x 15 cm                        |
| Color                | Brown, red or yellow                   | White, gray or yellow                  | Tan, gray, red and yellow              |
| Ascites              | Rare                                   | 50% > 6 cm                             | Yes                                    |
| Cystic Degeneration  | Rare                                   | Yes                                    | Yes                                    |
| Encapsulated         | Yes                                    | Yes                                    | Yes                                    |
| Microscopic          | Polygonal/polyhedral                   | Stellate or spindle-shaped             | Oval to spindle-shaped                 |
| Mitoses              | 1-2 / 10 HPF                           | 1-3 / 10 HPF                           | 1.5 / 10 HPF                           |
| Malignancy           | 20-25%                                 | Less than 1%                           | Na evidence to date                    |
| Immunohistochemistry | + Vimentin, Actin, Desmin<br>- Keratin | + Vimentin, Actin, Desmin<br>- Keratin | + Vimentin, Actin, Desmin<br>- Keratin |



Figure 1.



Figure 2.

Primary low transverse Cesarean section was performed delivering a 1,500 gram female infant with one and five minute Apgar scores of seven and seven. Following the delivery, the patient underwent abdominal exploration, a left oophorectomy and a lymph node dissection. The ovary weighed 3,810 grams and had no adhesions to surrounding structures (Fig. 1). Ascites was present but could not be quantified due to its contamination with the blood and amniotic fluid from the Cesarean section. There was no evidence of extra-ovarian spread of the tumor. Frozen section identified the tumor to be of stromal cell origin of uncertain malignant potential, prompting the lymph node dissection. The patient required four units of packed red blood cells intraoperatively and three units postoperatively. She did well otherwise and went home on the fourth postoperative day.

The infant required only momentary respiratory support and was discharged to home after three weeks in the newborn nursery. At

two weeks post-operative, the patient was doing well.

The pathology report described a 3,810 gram tan to gray bosselated ovoid mass measuring 22.0 x 20.0 x 15.0 centimeters with an intact smooth, shiny serosal surface. A 12.1 cm area of hemorrhage was seen at one edge. On cut sections, the mass was noted to be pale yellow to tan solid to focally nodular in appearance with multiple small cyst-like structures (Fig. 2).

Microscopic examination showed a lesion composed of a monomorphic population of large oval to spindle-shaped eosinophilic-staining cells with vesicular nuclei and approximately 3 mitoses per 20 HPF (high powered fields) (Fig. 3). The stroma of the lesion was markedly edematous with areas of necrosis and hemorrhage. Immunoperoxidase stains for actin and vimentin were uniformly positive with very focal positive staining for desmin. Cytokeratin stain, however, was negative. The staining pattern was consistent with ovarian stroma. The

differential diagnosis histologically included thecoma/fibroma, Sertoli-Leydig tumor, and lipid cell tumor (steroid tumor). Although rare, the latter diagnosis was initially favored.

The necrosis and mitosis count, although low, were worrisome features. The slides were sent to Dr. Robert Young, an expert in gynecologic pathology at Massachusetts General Hospital in Boston. His consulting diagnosis was a cellular ovarian fibroma with mitosis "... a pure stromal tumor with low malignant potential."

## Discussion

The histological differentiation of a benign stromal tumor such as thecoma/fibroma from a malignant stromal tumor can be challenging, and in this case was complicated by the progestational effects of the intercurrent pregnancy.<sup>4</sup> Information regarding the effects of pregnancy on these tumors is limited as ovarian neoplasms in pregnancy are rare, occurring in only 1:273 to 1:2489 live births, of which only 5 percent are malignant.<sup>5</sup> A variety of tumor characteristics including clinical picture, gross description, and microscopic description were used to diagnose this ovarian tumor as a benign cellular fibroma rather than a lipid cell neoplasm (Table 1).

The clinical picture did not favor either the diagnosis of fibroma or lipid cell tumor. First, the present case demonstrated no manifestations of hormonal effect. Lipid cell tumors are virilizing in approximately 90 percent of cases, while ovarian fibromas are not.<sup>3,6</sup> When similarly virilizing ovarian tumors, such as sex cord-stromal tumors, have been reported in association with pregnancy, however, their hormonal effects have rarely been clinically apparent.<sup>4</sup> Estrogenic manifestations are not recognizable due to the high levels of estrogen associated with pregnancy. Androgenic manifestations are similarly absent, probably due to aromatization of androgens by the placenta.<sup>4</sup> Therefore, although the lack of virilizing features in this patient favors a fibroma, it does not exclude the possibility of a lipid cell tumor.

Second, the patient's young age favored the diagnosis of lipid cell tumor. Fibromas usually occur in women over age 40 with the average age of discovery being 48 years.<sup>3,7</sup> Lipid cell tumors, on the other hand, can occur at any age, but are most common in reproductive age females and very rarely can occur before puberty.<sup>2,6</sup>

Next, the apparent rapid growth of this tumor did not aid in its diagnosis. Fibromas are typically very slowly growing ovarian tumors, while the rate of growth of lipid cell tumors has not

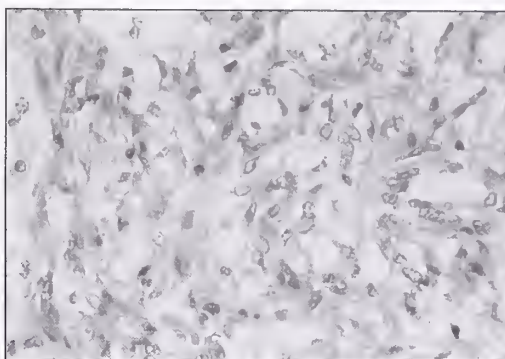


Figure 3.

been reported in the literature.<sup>3</sup> There is no clear documentation of the speed at which this tumor grew; however, it appears to have grown from a clinically inapparent mass to a weight of over 3,800 grams in a time span of less than four months.

Finally, the presence of ascites in this patient, a finding common to many forms of ovarian malignancy, is classic in ovarian fibromas.<sup>8</sup> Ascites is found in 50 percent of cases of fibromas over five centimeters, and Meig's syndrome (the triad of ovarian tumor, ascites, and hydrothorax) is seen in 1 to 3 percent of cases.<sup>9</sup> Ascites can occur with lipid cell tumors also, but the incidence is rare.<sup>10</sup> Thus, clinical factors did not suggest a clear diagnosis.

Gross findings suggested the diagnosis of a benign fibroma, but certainly were not conclusive. The tumor reported in this case measured 22 × 20 × 15 centimeters and weighed over 3,800 grams. Although most fibromas grow to less than 20 centimeters, they can range from six to 30 centimeters with some tumors reaching 50 pounds or more.<sup>3</sup> Since lipid cell tumors are rare, the true scope of their growth potential is not fully known, but most have been less than five centimeters.<sup>6</sup> This tumor's dimensions are therefore more consistent with a fibroma.

Other gross findings were less helpful in the diagnosis of this tumor. The tumor's prominent cystic degeneration is characteristic of fibromas, but has also been reported in lipid cell tumors.<sup>10</sup> The cut color of this tumor, described as tan, gray, yellow, and pale red, is similar to that of both fibromas and lipid cell tumors.<sup>2,3</sup> The tumor's unilaterality is also typical of both fibromas (90 percent) and lipid cell tumors.<sup>2,3</sup>

Microscopically, this tumor was noted to consist of oval to spindle-shaped cells which is similar to that seen in fibromas (Fig. 3). This is in contrast to lipid cell tumors which are described as polygonal or polyhedral.<sup>6,8,11</sup> Some features of

progestational effect such as large cell size and eosinophilic staining of cytoplasm were noted; however, the marked stromal edema and areas of cellular necrosis were worrisome for a malignant tumor. The amount of mitosis is one to two per 10 HPF for lipid cell tumors and one to three per 10 HPF for fibromas, both of which are similar to the 1.5 mitoses per 10 HPF seen in this tumor.<sup>7,10</sup> Immunohistochemistry staining performed on this tumor was positive for vimentin, actin, and desmin, and was negative for keratin, confirming this tumor's stromal cell origin.<sup>9,12</sup> Since both fibromas and lipid cell tumors arise from stromal cells, the immunoperoxidase stains in this case were not helpful in differentiating between these two specific lesions.

Taking all factors into account, the diagnosis in this case is most consistent with a benign ovarian fibroma. The tumor's intact capsule, lack of adhesions, and lack of identifiable metastatic disease, are consistent with a benign cellular fibroma. In fact, less than one percent of fibromas become malignant as opposed to 20 to 25 percent of lipid cell tumors, especially if they grow larger than eight centimeters.<sup>2,3,6</sup> The patient's young age, the tumor's rapid growth and large size, and the microscopic necrosis, hemorrhage, and mitoses, however, all raised the question of a tumor of low malignant potential.

Although not described elsewhere in the literature, the pregnancy may have contributed to the accelerated growth of this tumor, again raising the concern for possible malignancy. Overall, the higher prevalence of ovarian fibromas makes this diagnosis most likely. Fibromas make up 20 percent of all solid ovarian tumors whereas lipid cell tumors comprise less than one-tenth of 1 percent of ovarian neoplasms.<sup>1,3,10</sup>

The patient is scheduled for follow-up care, and ultimately only the future can demonstrate the true nature of this tumor.

## The Authors

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## Alternative Medicine: What is the Physician's Role?

Laurence H. Altshuler, MD

Over the past 10 years, Alternative Medicine has become increasingly popular in the patient population, as reflected by the media and confirmed by several studies. Conventional research has demonstrated benefits of some alternative methods, but many others are questionable or useless. Many alternative methods are not licensed or certified and alternative products are not regulated or controlled. It behooves us as physicians to be aware of our patients' inclinations toward using alternatives and obtain the knowledge necessary to guide them appropriately.

In 1993, Eisenberg and colleagues first reported on the use of alternative medicine and have now updated the current trends up to 1997.<sup>1,2</sup> They report that presently, 42.1 percent of patients are using alternative methods, increased from 33.8 percent in 1990. Total visits increased from 427 million to 629 million, exceeding total visits to all US primary care physicians. In expenditures, \$21.2 billion was spent in 1997 for alternative services, \$12.2 billion out-of-pocket (Table 1). There is no question therefore, that alternative methods are actively being pursued by a significant number of patients.

In addition, most of these patients are not informing their physicians of these choices. Eisenberg reported that 61.5 percent of alternative medicine consumers did not inform their medical doctors of their alternative therapy use. This is despite the additional finding that 96 percent of these patients were still utilizing conventional medical care. Most common medical conditions were being treated by both approaches.

Since the majority of patients utilizing alternative methods still rely primarily on conventional approaches, physicians are in the best position to influence medical decision-making.

**Table 1. Extrapolated Projections of Expenditures for Alternative Therapies in the US in 1997\***

| Category of Expenditure  | Billions of Dollars |
|--|---------------------|
| Total expenditures for professional services, 15 therapies         | 21.2                |
| Out-of-pocket expenditures for professional services, 15 therapies | 12.2                |
| Megavitamins   | 3.4                 |
| Commercial diet products   | 1.7                 |
| Herbol medicine  | 5.1                 |
| Therapy-specific books, clothes and equipment                      | 4.7                 |
| Total out-of-pocket expenditures for Alternative Therapies in 1997 | 27.0                |

\*From Eisenberg, JAMA. 1998;280:1574

To do so however, they must gain an understanding of such practices and why patients are seeking them. With this knowledge, conventional practitioners can more efficaciously guide their patients on the most judicious path to health.

### Why Patients Are Seeking Alternative Methods:

Astin<sup>3</sup> in April 1998 reported results of a survey to explore the reasons patients were seeking alternative approaches. Several factors were predictive.

1. Poorer health status
2. Holistic orientation to health (believing in mind/body/spirit in treating health problems)
3. Having had a transformational experience which changed the patient's world view
4. Any of the following health problems: anxiety, back problems, chronic pain, urinary tract problems (Eisenberg study expanded on this list. See Table 2)
5. Classified as a cultural creative (commitment to environmentalism or feminism and interest in spirituality and personal growth psychology)
6. Better educated

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**Table 2. Most Frequently Reported Medical Conditions Treated by Alternative Methods\***

| Condition          | %    |
|--------------------|------|
| Back problem       | 24.0 |
| Allergies          | 20.7 |
| Fatigue            | 16.7 |
| Arthritis          | 16.6 |
| Headache           | 12.9 |
| Neck problems      | 12.1 |
| Hypertension       | 10.9 |
| Sprains/strains    | 10.8 |
| Insomnia           | 9.3  |
| Lung problems      | 8.7  |
| Skin problems      | 8.6  |
| Digestive problems | 8.2  |

\*From Eisenberg, JAMA 1998;280:1573

**Table 3. Most Popular Alternative Therapies in 1997\***

| Method                      | Landmark Healthcare | Eisenberg |
|-----------------------------|---------------------|-----------|
| Relaxation techniques       | —                   | 16.3      |
| Herbal therapy              | 17                  | 12.1      |
| Massage therapy             | 14                  | 11.1      |
| Chiropractic                | 16                  | 11        |
| Diet                        | —                   | 8.4       |
| Spiritual healing by others | —                   | 7.0       |
| Vitamin therapy             | 13                  | 5.5       |
| Self-help groups            | —                   | 4.8       |
| Imagery                     | —                   | 4.5       |
| Energy-healing              | —                   | 3.8       |
| Homeopathy                  | 5                   | 3.4       |
| Hypnosis                    | 1                   | 1.2       |
| Biofeedback                 | 2                   | 1.0       |
| Acupressure                 | 5                   | —         |
| Acupuncture                 | 2                   | 1.0       |
| Noturophy                   | 1                   | —         |
| > 16 alternative therapies  | —                   | 42.1      |

\*Used in the past 12 months (%)

It was noted that dissatisfaction with conventional medicine was not a significant factor, nor was the desire to keep their own control over health decisions. Only 4.4 percent relied primarily on alternative forms of treatment.

### Alternative Methods: Benefits and Pitfalls

The most common alternative treatments are mind-body techniques (including relaxation techniques, imagery, hypnosis, and biofeedback), herbal medicine, massage, chiropractic, diet, spiritual healing by others, and megavitamins. Acupuncture and homeopathy are not as common in the U.S. as they are worldwide. Percentages of use for specific alternative methods vary depending on which survey is assessed (Table 3).

### Chiropractic

Chiropractic treatment is the most commonly used service-provided alternative method. Although existent for over a hundred years, most research has been done in the past twenty. Chiropractic is the nation's third largest primary health care profession, containing approximately 50,000 members in North America, half having graduated since 1977.

There have been more than 40 randomized controlled trials and two meta-analyses supporting the use of chiropractic care.<sup>4,5</sup> These studies demonstrate benefit primarily in subacute neck and low back pain as well as headaches.<sup>6,7</sup>

The Agency for Health Care Policy and Research Committee, (AHCPR), composed of physicians, chiropractors, osteopaths, nurses, and therapists, convened in 1995 to review the literature on low back pain. Among other recommendations, the committee did support the use of spinal manipulation therapy (SMT) for pain relief. The RAND study in 1991<sup>8</sup> found SMT appropriate for selected persons with uncomplicated low back pain, but not from those for herniated disc, spinal stenosis, or spondylolisthesis.

For neck pain and headaches, there have been at least 10 trials. A meta-analysis suggested that there was early evidence to support the use of manual therapy in combination with other treatments for short-term neck pain relief.<sup>9</sup> A few studies have shown benefit from chiropractic for certain types of headaches.<sup>10</sup>

Other conditions purported to be helped by chiropractic intervention include treatment of upper extremity disorders (carpal tunnel), gynecological disorders (e.g., dysmenorrhea, PMS), childhood disorders (e.g., scoliosis, otitis media, colic, enuresis), and pulmonary and cardiac disorders (hypertension, COPD). However, the majority of these studies are of varied or doubtful quality and have not been supported by conventional blinded studies.

Chiropractic manipulation uses a high-velocity, low amplitude, short-lever thrust. However, there are other forms of manipulation as well, used by physical therapists, therapeutic massage therapists, and osteopaths, which are more low-velocity and do not involve thrusting. These latter methods appear to be as or more efficacious.

There are several criticisms of chiropractic care. First, inadequate examination, knowledge, and x-ray interpretation can lead to inappropriate use of spinal manipulation. Also the manual exam and treatment requires a high level of technical skill, which many chiropractors do not achieve.<sup>11</sup>

Secondly, many chiropractors engage in life-long monthly or even weekly spinal adjustments for "preventive maintenance," even in patients who are asymptomatic. Others may treat patients for exceptionally long periods of time despite no apparent benefit.

Thirdly, many chiropractors provide other alternative therapies, some of which may be unproven, to supplement their practices. Some surveys suggest that more than 70 percent of chiropractors may recommend and sell vitamins, supplements, homeopathic remedies, and/or glandular substances, despite little training in nutrition.

Fourth, some chiropractors portray themselves as primary care specialists, diagnosing and treating numerous ailments, again despite having little more than didactic training.<sup>12</sup>

Despite these problems, surveys indicate that one out of 20 patients seek chiropractic care in the course of a year. Part of this can be explained by studies which reveal that chiropractors were rated above conventional doctors because they performed more extensive histories and physicals and more often explained the diagnosis.<sup>13</sup>

In sum, SMT can be useful in selected patients, primarily uncomplicated low back pain, but patients and physicians should question efficacy of treatment if prolonged or ineffective after an appropriate length of time. Chiropractic treatment for other disorders are not backed by well designed research. Finally, physicians would do well to note that chiropractors are most successful because they embody the importance of the patient-physician relationship.

### **Supplements, Vitamins and Herbs**

Sales of herbal medicines, supplements, and vitamins have reached \$2.5 billion per year as of 1996. Health food stores are seeing an ever increasing volume of customers, many of whom have no idea what they are taking or if it works.

The Dietary Supplement Health and Education Act of 1994 allowed various substances to be labeled as "dietary supplements," thereby bypassing FDA requirements for proven efficacy, content, and safety. This act allows the FDA to remove supplements only if they can prove the dangers.

The best research to date on herbal preparations has been conducted in Germany, which publishes the Commission E Monographs. This book, now available in English translation,<sup>14</sup> details the chemical structures, actions, side effects and dosages of more than 400 herbs, but

not supplements. Currently in the US, a great deal of research is being conducted on the efficacy and safety of all these substances, but may take several years to establish a consensus.

Herbs which have so far been noted as beneficial in well-controlled double-blind studies<sup>14-16</sup> include ginkgo (neurological function), echinacea (immune system, wound healing), St. John's wort (depression), garlic (atherosclerosis), aloe (wound healing), hawthorne (chronic heart failure), and saw palmetto (BPH). Others showing promise include milk thistle (liver), kava kava (anxiety), and valerian (insomnia). Oils containing omega-3 fatty acids (flaxseed) and gamma linoleic acid (GLA) have demonstrated cardiovascular and cholesterol reducing benefits.

Vitamins which have been demonstrated to be beneficial include vitamin E (cardiovascular), vitamin C (URI, cancer), niacin (cholesterol lowering), beta-carotene (neurological), folate (especially pregnant women), and B6/B12 (decrease homocysteine levels).<sup>17-19</sup>

There are also many minerals which are essential to health, many of which are lacking in the standard American diet, especially in those eating fast foods and processed foods. For such patients, a basic multivitamin may be helpful. One mineral studied extensively is selenium, which has demonstrated benefits in HIV/AIDS and in helping prevent many types of cancer. Another supplement, CoQ10, has been demonstrated to be beneficial in heart failure.

The primary problem with supplements, herbs and vitamins is quality control. From manufacturer to manufacturer, both quality and quantity of packaged products can vary enormously. Testing has revealed that garlic content can vary 19,000 fold from product to product and that ginseng concentrations can vary as much as 1,000 percent. An analysis of ginseng products revealed that more than 25 percent did not contain any of this ingredient at all. Analysis of feverfew revealed that only one out of 32 products contained enough of the active ingredient to be effective.

A second problem is dosage. Although the German Commission E Monograph has researched dosing, as with conventional medications, such dosing is variable from patient to patient. Most dosing recommendations are given as a range (e.g., 2 to 4 caps three times per day), thus leaving it up to the consumer or practitioner to determine the appropriate dose.

Thirdly, some herbs/supplements are simply not effective. Chondroitin, shown in studies to increase cartilage growth when used intra-

**Table 4. Herb Supplement Sales in Retail Outlets in U.S. in 1997**

|                          |               |
|--------------------------|---------------|
| Ginkgo                   | \$90,197,288  |
| Ginseng                  | 86,048,080    |
| Gorlic                   | 71,474,288    |
| Echinacea/goldenseal     | 49,189,576    |
| St. John's wort          | 47,774,792    |
| Saw palmetto             | 18,381,592    |
| Grapeseed extract        | 9,965,772     |
| Evening primrose oil     | 7,299,353     |
| Cranberry                | 6,182,210     |
| Valerian                 | 6,104,450     |
| Bilberry                 | 4,555,723     |
| Milk thistle             | 3,037,672     |
| Kava kava                | 2,950,132     |
| Total Herbal Supplements | \$441,502,560 |

\*From American Botanical Council, Austin, TX

venously, is not well absorbed orally, which is the only form in which it is sold. Evening primrose oil has been shown to be helpful in arthritis and atopic dermatitis, but only in such large dosages that free radicals are produced. Chromium picolinate has been popularly used for weight loss and muscle strengthening, but studies have negated these claims. Grapeseed extract appears to be a potent antioxidant in vitro, but no positive results have emerged from in vivo studies. Despite these research findings, consumers still buy such products in ever-increasing amounts (Table 4).

Finally, herbs and supplements may have side effects and interact with each other as well as with conventional medications.<sup>20</sup> Some herbs, such as ephedra, comfrey, and black cohosh are potentially lethal if not used judiciously by an experienced practitioner. Several herbs as well as vitamin E can cause excessive bruising/bleeding if used in combination with anti-coagulants. Other herbs can be adulterated because of similarities in appearance or because demand has outstripped supply. Chinese herbs commonly contain impurities, such as insects, dirt, and urine residues. An estimated 23 percent of Chinese herbs are adulterated, most commonly with benzodiazepines, steroids, and NSAIDs.<sup>21</sup>

Besides herbs, many supplements also have considerable side effects. Selenium and zinc can both have numerous untoward effects if they are already adequately supplied in the diet and then additionally taken as a supplement. Other supplements can have side effects even at suggested dosages; this is especially true of the hormonal supplements, DHEA, HGH, and Melatonin, none of which current research has yet shown to be efficacious.<sup>22</sup>

## Massage

There are numerous types of massage, ranging from gentle touching to intensely therapeutic. In actuality, all types of massage have been shown to be beneficial for health, even if nothing more than allowing relaxation.

There are many variations of massage which are used for more specific types of medical conditions. Two examples are reflexology, which utilizes acupressure points in the feet, and rolfing, which focuses on the deep connective tissue.

Massage has been well researched and many well-designed studies have shown benefit in a variety of diseases,<sup>23-25</sup> including asthma, pain, arthritis, AIDS, fibromyalgia, chronic fatigue syndrome, and autistic children. It has been demonstrated to increase insulin levels in diabetics and increase the rate of weight gain in premature infants.

Problems with massage are once again related to the practitioners and differences in technique and training. There are also numerous techniques named for the individuals who have promoted them: Trager, Rolfing, Alexander, Feldenkrais, Hanna, Aston-patterning, Hakomi, Hellerwork, Rubenfield Synergy, and the Pessio system. Other names describe the technique: Swedish, manual lymph drainage, ideokinesis, continuum movement, kinetic awareness, cranio-sacral, shiatsu, authentic movement, etc. Although some of these techniques are distinct, most are minor variations of or additions to other types. In general, there are only five major types of massage.

There are massage schools which provide degrees for massage therapists, but they vary in quality as does any schooling. Several states license massage therapists, but Oklahoma does not. Therefore, it is "buyer beware."

## Healing by Others/Energy Healing

Healing by others and energy healing together are utilized as commonly as massage or chiropractic. Such techniques are designed to project "energy" onto and into the patient, known to the layman as "laying on of hands."

There are several varieties including Reiki, therapeutic touch, and external QiGong. Reiki and QiGong are systems that are centuries old and incorporate psychological and wellness techniques along with modifying the patient's energy patterns. In this country, therapeutic touch is the most frequently used, but primarily emphasizes energy manipulation.

A study at Columbia University Medical Center has found that heart surgery patients

undergoing therapeutic touch heal faster, require less medication, and have less complications.<sup>26</sup> Another study reported similar effects in burn victims.<sup>27</sup> Many other studies have been conducted utilizing therapeutic touch, ranging from milk let-down in mothers of non-nursing pre-term infants to disruptive behavior of Alzheimer's patients.

However, in a well publicized study conducted by a 12-year-old girl, therapeutic touch practitioners were unable to consistently detect energy from numerous subjects,<sup>28</sup> although this is a necessary requirement for this form. There have been no well designed double blind studies on Reiki or external QiGong.

It is possible that energy healing effects are placebo since touching and providing more attention to the patient alone have been demonstrated to have beneficial effects on a variety of conditions. Since this emitted "energy" has not been detected or quantified by scientific instrumentation, it cannot be ascertained whether the energy itself provides benefits or even actually exists.

There are no licensing requirements for any of these forms. Therapeutic touch has become quite popular and is being used in 80 hospitals in North America and by more than 40,000 practitioners worldwide, most of them nurses. However, training can vary from self-learning to formalized schooling with certification, so skills and experience can differ significantly. Reiki also does not require lengthy training, but external QiGong is a much more disciplined and demanding field of study, with very few qualified practitioners.

## **Acupuncture**

Acupuncture is a 5,000-year-old system based on the principle of Qi (Chi), which means energy. When the flow of this energy is blocked, disease is the result; unblocking the energy channels through acupuncture reduces or cures the disease.

Western research has made great strides in understanding how acupuncture works and demonstrating its usefulness. Some of the findings include:

- acupuncture stimulates the production of endorphins, enkephalins, and other neurotransmitters
- acupuncture interacts with sensory receptors in skin and muscle, stimulating portions of the brain differently
- it can stimulate the autonomic nervous system
- needling increases blood flow in the limbic system, primarily the hippocampus and amygdala.

In February 1998, the NIH issued a consensus opinion on acupuncture,<sup>30</sup> stating that it is clearly effective for hyperemesis of pregnancy or post-chemotherapy and for post-dental pain. It was found to be probably effective when used as an adjunct for low back pain, carpal tunnel, fibromyalgia, asthma, tennis elbow, stroke rehabilitation (strengthens and improves muscular function and control), and drug addictions. Other studies have found acupuncture useful in allergies, gastrointestinal conditions such as reflux and irritable bowel, neuralgias, and headaches.

There are actually many different forms of acupuncture and it is practiced differently depending in which country it is performed. Other techniques used with acupuncture include moxibustion (burning an herbal combination on the needle) and cupping, which uses suction principles. It also does not absolutely require the use of needles; sound, laser, and electrical stimulation of acupuncture points can be just as effective and are usually needed in a number of individuals who are too hypersensitive for needling. However, most acupuncturists do not have access to, or utilize, these devices.

There are now 15,000 doctors, as well as many more chiropractors and doctors of Oriental Medicine, who practice acupuncture in the United States. However, there is a wide disparity in training and expertise among these providers. Only 27 states have regulations, 20 of which require exams. Only 16 states require licensure, five states require certifications, and five states require registrations. Oklahoma has no licensing requirements.

## **Movement**

In alternative approaches, exercise is often combined with movement therapy. This includes, yoga, QiGong (pronounced Chi Gong), and T'ai Chi (which is a variation of QiGong). These approaches also incorporate breathing techniques, which potentiate the benefits of the movements. There have been numerous studies done demonstrating the beneficial effects of exercise/movement on every organ system. A recent study completed at John's Hopkins revealed lowering of systolic blood pressure by 7 mm after 12 weeks of T'ai Chi.<sup>31</sup> Another study demonstrated that a yoga-based regimen was more effective than wrist splinting or no treatment in relieving some symptoms and signs of carpal tunnel syndrome.<sup>32</sup>

The primary problem with these methods is the instruction. There are many teachers who promote themselves as well trained, yet are not.

This is especially important with QiGong/T'ai Chi; for example, many videos are marketed using martial arts movie stars or Chinese/SE Asian individuals who appear knowledgeable but make significant errors which negate the benefits. When one considers that there are more than 3,000 QiGong exercises, with no licensure or rating system, it becomes apparent that benefits can be quite variable.

### **Mind-Body (Psychoneuroimmunology)**

The use of the mind to heal the body is not a new concept. Physicians experience firsthand how emotions, stress, attitude, and other socioeconomic factors can affect the cause and outcome of disease. Psychoneuroimmunology is the term now used to describe this relatively new field of medicine.

Several types of mind-body medicine have been used for decades. Biofeedback has been shown to be effective for stress reduction, insomnia, headaches, asthma attacks, pain, and GI disorders.<sup>33-34</sup> Hypnosis, approved by the AMA as valid in 1958, has been used successfully for addictions, stress, some psychological neuroses, and for pain. Studies indicate almost 94 percent benefit, although some of this is due to the relaxation effects.

Meditation/relaxation is another area which has received a great amount of attention. Studies have again shown benefit, not only for physical conditions, but also psychological and spiritual aspects. A study using transcendental meditation demonstrated decreased respiration, heart rate, plasma cortisol, and heightened reaction times.

Prayer and religious belief have also received much attention. Several studies<sup>35</sup> conducted at major university medical centers have shown beneficial results from both intercessory prayer as well as in those regularly attending religious services. Some of the beneficial results have again been attributed to the relaxation/meditative mechanisms.

A more recent mind-body intervention is that of guided imagery, which has been used in stress related conditions (GI, urinary, heart), chronic pain control, and cancer. Even newer is interactive imagery, a process which combines aspects of meditation, hypnosis, and imagery to invoke changes in the body. It is being utilized for emotional dysfunctions, cancer, and other chronic diseases, as well as for emergency emotional distress such as panic attacks.

All of these mind-body techniques have been demonstrated to have beneficial effects in all

organ systems. An added benefit is that all are safe, with no side effects or interference with other types of treatment.

Biofeedback and hypnosis do require training, although they can be practiced without a license. The same is true for various meditation techniques and imagery, especially interactive imagery, which are being done by a wide range of practitioners. There are organizations and societies for each of these methods which offer certified training. Even though there is little to no harm which can occur from these techniques, patients should check credentials before utilizing such approaches if they are to receive maximum benefit.

### **Homeopathy**

At the turn of the century, homeopathy was the major type of medical practice in the United States. There were more than 20 medical colleges, 180 hospitals, and 31 journals. It is currently undergoing a renaissance in the US and Europe; in 1994, Americans spent \$165 million on homeopathic remedies and sales are rising more than 20 percent yearly.<sup>36</sup>

Homeopathy is based on the principle that a disease is best treated with a remedy that would produce a similar set of symptoms in a healthy volunteer. It is further assumed that through repeatedly diluting and shaking the remedies (succussion), they become more powerful (called potentization). Homeopathy thus represents a system of healing quite distinct from conventional methods.

There is no question that patients and many physicians perceive homeopathy to be effective.<sup>37</sup> The most authoritative review was published in 1991, which included 107 controlled trials, 81 of which demonstrated homeopathy to be more effective than the control therapies.<sup>38</sup> Yet the authors concluded that the evidence was insufficient to draw definitive conclusions. Since then there have been many sound trials which have shown positive results compared to placebo, but there have also been many negative studies.<sup>39</sup> The major problem is a lack of positive replications or confirmatory studies.<sup>40</sup>

The reasons for this are multiple. Homeopathy is highly individualized and the correct way to prescribe a remedy differs widely — some prescribing on the basis of totality of symptoms, some on acute presentations and others on constitutional types or essential features.<sup>41</sup>

There are approximately 6,000 practitioners of homeopathy in the United States, but again, training and experience are variable. Although it

is a safe procedure, more research is necessary before confirming its efficacy. Homeopathy is licensed in four states, but not in Oklahoma.

### **Other Alternative Methods**

Methods that may be considered by patients but that have little to no controlled research data supporting them include folk remedies, ayurvedic, and chelation. It has been conservatively estimated that there are more than 340 different alternative techniques, 26 categories of practice, and more than 10,000 ways of using them. Certainly anecdotal reports of efficacy abound for almost all of these methods, but neither these approaches nor the practitioners who use them can or should be recommended without further investigation.

### **Alternative Medicine and Medical Education**

With the public's increasing use of alternative methods, many medical schools have responded by educating students and physicians about these therapies.

Several medical groups and associations have urged medical schools to add the teaching of alternative therapies to their curriculum. This includes the Group on Educational Affairs of the Association of American Medical Colleges, the Society of Teachers of Family Medicine, the American Public Health Association, and the AMA.

In a very recent article, 117 medical schools replied to a survey on the teaching of alternative medicine.<sup>42</sup> Of these, 64 percent offered elective courses in alternative medicine or included these topics in required courses. Of 123 courses, 68 percent were stand-alone electives and 31 percent were part of required courses. Thirty-one percent of the courses were offered by departments of family practice and 11 percent by departments in internal medicine. Common topics included chiropractic, acupuncture, homeopathy, herbal therapies, and mind-body techniques. The University of Oklahoma College of Medicine does not offer alternative medicine courses.

### **Recommendations for Physicians**

According to the Astin study, 60 percent of physicians have recommended the use of at least one alternative method to their patients in the last year. However, many other physicians refuse to acknowledge such approaches and some abhor them.

In Eisenberg's latest study, 61.5 percent of patients utilizing alternative medicine did not

inform their physicians, primarily because they felt their physicians would not be encouraging. It is important that all physicians are at least open to communication with their patients regarding alternative methods, and preferably show no bias regarding it. Since more than 40 percent of patients are seeking such alternatives, if physicians do not have open communication, the healing process can only suffer. On the other hand, showing a willingness to discuss such methods allows a greater understanding of the patients' beliefs and practices and can benefit the doctor-patient relationship.

The statistics show that patients want to continue using conventional medicine even if they utilize alternatives. These facts reinforce that efforts made on the part of physicians to acknowledge the alternative trend and help guide their patients will be well received.

Furthermore, since some alternative approaches may interfere with conventional treatment, physicians must be aware of such factors for proper evaluation and treatment of the patient's condition.

Physicians do not need to like, believe in, or recommend alternative medicine to guide their patients. Many patients simply want to know their physician's opinion based on reasonable and objective research and experience. If a physician does not think an alternative method is useful, most patients are satisfied with a straightforward explanation.

It would be helpful for all physicians to gain some basic knowledge regarding alternative methods in order to provide meaningful direction to their patients. Other than articles such as this one and others in various journals, the NIH Office of Alternative Medicine provides research data and information to physicians and can easily be accessed through the Internet.<sup>43</sup>

Physicians who do not wish to become knowledgeable or are unsure what to recommend are encouraged to seek consultations with alternative medicine practitioners. Since licensing, training, and experience can vary widely, physicians are encouraged to investigate the practitioners before referring patients and to obtain feedback from those patients following alternative therapies. (J)

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## Hemophilic Pseudotumor of the Soft Tissue of the Hand: A Case Report

Jeffrey D. Hopkins, DDS, MD; Ghazi M. Rayan, MD

A 25-year-old, right hand dominant man with a history of Hemophilia A, presented with an enlarging 2 x 3.5 cm mass on the dorsum of his dominant hand following minor trauma. Factor VIII activity level was 12 percent of normal. A diagnosis of hemophilic pseudotumor was made and the mass continued to enlarge despite medical management. Surgical intervention was carried out in order to prevent impending skin necrosis or rupture. The patient was treated by surgical excision of the lesion along with factor replacement therapy. The patient's symptoms resolved and he had no recurrence of the tumor.

### Introduction

Complications resulting from Factor VIII deficiency in patients with Hemophilia A have been reported widely in the literature. One of these complications, hemophilic pseudotumor, is characterized by recurrent episodes of bleeding forming a painless mass of clotted blood surrounded by a thick fibrous capsule. The term hemophilic pseudotumor refers to the resemblance of these lesions, both clinically and radiographically, to malignant tumors of bone.<sup>1</sup> In the past, these lesions have been mistaken for sarcoma.<sup>2,3</sup> Malignant transformation does not occur in these lesions.<sup>4</sup>

During the first half of this century, hemophilic pseudotumors or hemophilic blood cysts were infrequently reported in the literature. In 1918, Starker<sup>5</sup> reported the first case of this entity in the femur of a young hemophilic patient. Firor and Woodhall<sup>6</sup> in 1936, reported a case of a large pseudotumor of the thumb with destruction of the metacarpal and phalanges, which was treated by amputation using electro-

cautery. Ghormley and Clegg<sup>7</sup> in 1948, reported a case involving the thumb with destruction of the proximal and distal phalanges which was treated by amputation of the digit. MacMahon and Blackburn<sup>1</sup> in 1959, reported a case of a large pseudotumor of the index metacarpal and the soft tissue of the first web space which was treated by plaster cast immobilization for nine months. Lazarovits and Griem<sup>8</sup> in 1968, reported a similar case involving the fifth metacarpal and carpus managed by irradiation. These management protocols were adopted prior to the availability of factor replacement therapy.

Pseudotumors are rare, accounting for 1 to 2 percent of patients with moderate to severe forms of Factor VIII or IX deficiency<sup>9,10</sup> and seldom occurs in mild cases.<sup>11,12</sup> Patients with Factor VIII activity less than 1 percent of normal are classified to have severe, 1 to 5 percent as moderate, and 5 to 25 percent as mild condition.<sup>13</sup> Even patients with mild forms of hemophilia may develop significant bleeding during minor surgical procedures. Prior to effective replacement therapy, fatal bleeding was reported from pseudotumors, and even today, this complication can occur.

Pseudotumors occur most frequently in the pelvis and long bones of the lower extremity.<sup>14</sup> They may be classified into three types:<sup>15</sup> Type I pseudotumors are localized to muscle or soft tissue, Type II lesions are located beneath the periosteum and may produce bony erosions, and Type III lesions arise primarily within the bone. Recurrent hemorrhage and hematoma formation are common to all types.

Pseudotumors involve the upper extremity infrequently.<sup>9</sup> Lancourt et al<sup>16</sup> found no pseudotumors distal to the elbow among 34 complica-

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Figure 1.

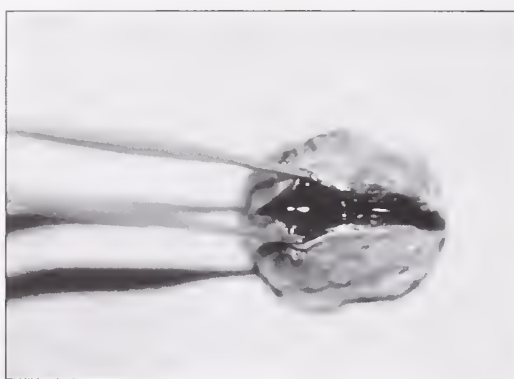


Figure 2.

tions of hemophilia involving the upper extremity. Magallón et al<sup>17</sup> reported 22 patients with pseudotumors, only three of which were in the upper extremity; two cases involved the radius, and one case involved the ulna. Recently, Shaw and Wilson<sup>11</sup> reported an unusual case of multiple intraosseous pseudotumors of the phalanges without soft tissue involvement in a patient with mild hemophilia. These pseudotumors were treated by replacement therapy, curettage, and freeze-dried cancellous bone grafting. The purpose of this article is to present a case of a hemophilic pseudotumor confined to the soft tissues of the hand.

### Case Report

A 25-year-old, right-handed man with a history of hemophilia A presented with hand swelling three weeks after sustaining minor blunt trauma to the dorsum of the right hand. The patient reported striking the back of the hand against a hard object and developing mild swelling of the area. A few days later, the swelling became noticeable, subsequently increased in size progressively, and became painful. Initially, the patient was treated with Hemophil M (Factor

VIII) 1,120 units intravenously in an attempt to control the progression of the lesion, but this was unsuccessful.

Examination demonstrated a 2 × 3.5 cm well circumscribed swelling on the dorsum of the right hand, raised approximately 2.5 cm from its base (Fig. 1). The lesion was firm, located over the third and fourth metacarpal bones and fixed to the underlying structures. The overlying skin was thin, non-adherent and dusky. Digital joint range of motion was normal. Sensory and motor function of the hand was normal. Radiographic examination was normal. Partial thromboplastin time was 49 seconds (normal 26 to 38.5). Factor VIII level was 12 percent of normal and Factor VIII inhibitor assay was zero.

A provisional diagnosis of hemophilic pseudotumor was made. Surgical intervention was recommended because of the persistent mass, associated pain, failure of conservative management, and the risk of skin necrosis or erosion. The patient received 2,240 units of self-administered Hemophil M intravenously the day prior to surgery. A 22-gauge catheter was used for intravenous line and a padded tourniquet was applied over the arm. A 3 cm, longitudinal incision was made over the mass between the middle and ring finger metacarpal bones. Soft tissue undermining was kept to a minimum. The mass was found to be well encapsulated and the dissection was carried out circumferentially. There was one distinct large vessel connected to the lesion proximally and two large vessels piercing it distally. These vessels were coagulated. The mass extended deeply and was found to be adherent to the dorsal aponeurosis and the sagittal bands between the two adjacent metacarpal heads. The lesion was dissected free from these structures and excised. Meticulous hemostasis was achieved with bipolar cautery and Gelfoam® (Pharmacia & Upjohn Co. Kalamazoo, Michigan) after tourniquet deflation. The wound was closed in layers followed by the placement of a pressure dressing and a palmar splint.

The mass consisted of a cyst-like encapsulated lesion containing very dark brown, organizing, clotted blood (Fig. 2). Microscopic appearance showed a central cavity filled with blood and fibrin surrounded by a pseudocapsule exhibiting fibroendothelial cells with sporadic hemosiderin filled macrophages (Fig. 3, 4).

Post-operatively, the patient's intravenous line was removed and a pressure dressing and elastic wrap were applied for several hours to minimize local bleeding. Another dose of Factor

VIII was administered the evening after surgery. On the first post-operative day, the patient's wound was examined and showed no evidence of hematoma formation. He received a total of 2,240 units of self-administered Factor VIII that day. This was followed by 1,120 units on the second, and again, on the third post-operative days. The patient's hand was examined one week post-operatively. There was a small hematoma on the radial aspect of the wound with adjacent skin ecchymosis. A compressive dressing was reapplied and the patient was encouraged to begin active range of motion exercises to prevent digital stiffness. The patient received another 1,120 units of Factor VIII. Two weeks after surgery, the wound was benign without any mass or hematoma, the sutures were removed, and the patient was instructed to use the splint occasionally. Three months post-operatively, the wound had healed and digital joint range of motion was normal. There was no recurrence of the mass and the patient required no further Factor VIII replacement for this condition.

## Discussion

Hemophilic pseudotumor of the soft tissue is an encapsulated, organized hematoma that often has firm consistency and may mimic a tumor. The terms hemophilic pseudotumor and hemophilic (blood) cyst have been used interchangeably. The term "pseudotumor" however, should be reserved for those lesions associated with bony changes, these tend to resemble malignant tumors.<sup>15</sup> The term hemophilic "cyst" is best used for soft tissue lesions. Prior to replacement therapy and widespread awareness of the condition, the diagnosis and treatment of pseudotumors was challenging. The diagnosis of pseudotumor is made by history, physical examination, and a high index of suspicion.<sup>18</sup> Jensen and Putman<sup>19</sup> grouped these lesions based on early and late radiographic features and on the duration of the pseudotumor. Early, the diagnosis can be difficult to make if periosteal elevation is the only finding. The differential diagnosis for early lesions includes osteomyelitis, Ewing sarcoma, and metastatic neuroblastoma. The differential diagnosis late in the clinical course, if an osteolytic process is present, includes primary bone sarcoma, infections, aneurysmal bone cyst, giant cell tumor, plasmacytoma (myeloma), and metastatic neoplasms. The differential diagnosis also includes neurofibroma, lymphoma, liposarcoma, spindle cell carcinoma, fibrosarcoma, and malignant fibrous histiocytoma.



Figure 3.

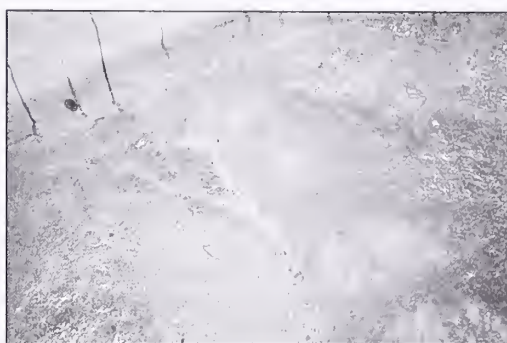


Figure 4.

Plain radiography, ultrasound, computed tomography, and angiography have all been used to evaluate these lesions. Hermann et al<sup>20</sup> found CT scanning to be the most efficient modality for evaluating both soft tissue lesions and bony involvement. Magnetic resonance imaging was described as sensitive and the method of choice for diagnosing pseudotumors.<sup>21</sup>

Various methods of treatment have been proposed for pseudotumors including supportive treatment, radiotherapy, embolization, and surgery. Prior to the availability of effective Factor VIII preparations, treatment methods included either immobilization and protection from further trauma<sup>1</sup> or amputation.<sup>6,7</sup> Surgery was avoided if possible for fear of fatal hemorrhage. The initial treatment of asymptomatic cases should be nonoperative utilizing replacement therapy and immobilization.<sup>19</sup> Magallón et al<sup>17</sup> reported poor results following replacement therapy alone for pseudotumors of any location. Only two of 15 cases were successfully managed non-operatively. In chronic lesions, the use of factor replacement and immobilization were also found to be ineffective and surgery is recommended.<sup>19</sup>

These tumors in the past, when mistaken for malignancies, were treated by irradiation.<sup>22</sup> For patients whose hemophilia is associated with a Factor VIII inhibitor, radiotherapy can be help-

ful because in these cases replacement therapy is ineffective.<sup>18</sup> Radiotherapy has been advocated for the treatment of hand pseudotumors especially if surgery is contraindicated.<sup>8</sup> Radiation produces sclerosis of the pseudotumor itself along with the stimulation of new bone formation.<sup>4</sup> Others believe that radiotherapy creates an endarteritis of the feeding vessels.<sup>9</sup> Embolization has been described for the treatment of large, deeply seated pseudotumors such as those involving the ilium.<sup>12</sup>

Surgery is the most effective form of treatment in selected cases.<sup>17</sup> Indications for surgical intervention include failure of nonoperative treatment, intractable pain, presence of a large mass, prevention of hematoma, erosion into the skin, risk of pathologic fracture, neurovascular compromise, or to obtain tissue for diagnosis.<sup>9,12,17,23,24,25</sup> Our reported case was managed surgically in order to control pain and prevent impending skin necrosis. In the series of Magallón et al.,<sup>17</sup> surgical treatment achieved the best results. Surgery is contraindicated in hemophiliacs in the presence of an inhibitor<sup>16</sup> because of the difficulty in obtaining adequate levels of Factor VIII prior to surgery.

Prior to the advent of replacement therapy, the mortality rate of pseudotumors was high. This was due to either fatal hemorrhage or infection. Despite recent advances in operative and nonoperative treatment, death has been reported from infection in a case involving the ilium.<sup>26</sup> Pseudotumor puncture or diagnostic needle biopsy has been associated with infection, relapse, fistulization,<sup>17</sup> septicemia, and death.<sup>27</sup> In addition to infection, other complications were reported including pathologic fracture,<sup>28</sup> rupture,<sup>19</sup> extremity swelling,<sup>29</sup> and compression neuropathies.<sup>30</sup>

### Conclusion

Hemophilic pseudotumors or hemophilic cysts rarely occur in the upper extremity, especially in the hand. We report a pseudotumor exclusive to the soft tissues of the hand without bone involvement. Non-operative treatment should be factor replacement, immobilization, and protection. Surgical intervention is indicated to prevent complications or when conservative measures fail.

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## Needles, Syringes, Injection Drug Users, and the Oklahoma State Medical Association

Glenn P. Dewberry, Jr., MD; Stacey E. Miller, MPH

At their 1998 Annual Meeting, the OSMA House of Delegates approved Resolution 25 that urged "the Oklahoma health care professionals who educate the many publics about HIV prevention to seriously promote access to sterile needles and syringes as an effective public health measure that reduces HIV infections and their associated health and social costs," and that the OSMA urge "the Oklahoma State Legislature to repeal any legislation preventing access to sterile needles and syringes." This resolution was introduced by the OSMA Council of Public and Mental Health and was based on "an impressive body of published literature" that demonstrated that needle exchange programs (NEPs) "have proven to be cost effective in reducing the number of new HIV infections." The Council also pointed out that "the Consensus Development Conference Statement of the National Institutes of Health supports lifting legislative restriction on programs that offer access to sterile syringes because they constitute a major barrier to realizing the potential of a powerful tool in HIV prevention."<sup>1</sup>

A review of the references on which the Council has based this resolution reveals several features of that research which should cause concern about the OSMA endorsement of the equivalent of needle exchange programs. It is also important to note the two studies, published in 1997, which provide very sound data that demonstrated that participation in needle exchange programs in two Canadian cities resulted in an increase in HIV seroconversion rates, rather than a decrease.<sup>2,3</sup> Information from these studies was not presented to the OSMA Reference Committee where Resolution 25 was discussed. These two studies were published after the NIH Consensus Statement was formulated in February 1997, and the important information from this most recent research was apparently not considered during the process of developing their statement.

Archibald and Stratthdee had found that "the proportion of injection drug users (IDUs) testing positive for HIV infection in Vancouver increased from 2 percent to 6 percent between 1993 and 1994," despite the city's NEP being among the most active in North America and exchanging more than 1 million needles per year in 1993 and 1994." Archibald hypothesized that a number of high risk activities such as borrowing used needles, cocaine injection, and time in jail were associated with NEP attendance.<sup>4</sup> It was also suggested that "the finding that NEPs attract high-risk IDUs could also explain the apparently paradoxical association between NEP attendance and HIV prevalence and incidence seen in some cities."

Stratthdee et al in a prospective study in 1996 of more than 1,000 injection drug users (IDUs) in Vancouver found the baseline prevalence rate of HIV was 23 percent, and after eight months of follow-up the estimate of HIV incidence was estimated at 16.5 per 100 persons-year, which "was much higher than that observed among prospective studies in Baltimore, Montreal, Amsterdam, and New York...of great concern in our study was the high level of reported needle-sharing behaviours...This suggests that little, if any, behaviour change occurred among individuals in our sample who had received an HIV-positive result... Our data are particularly disturbing in light of two facts: first, Vancouver has the highest volume NEP in North America; second, HIV prevalence among this city's IDU population was relatively low until recent years. The fact that sharing of injection equipment is normative, and HIV prevalence and incidence are high in a community where there is an established and remarkably active NEP is alarming." Frequent NEP attendance was an independent predictor of HIV-positive serostatus.<sup>2</sup>

Bruneau et al evaluated rates of HIV infection among injection drug users participating in needle exchange programs in Montreal from September

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1988, to January 1995.<sup>3</sup> Their cohort analysis included 974 HIV-negative subjects who were enrolled before October, 1994, to ensure all participants had been followed for at least three months. Their results were highly significant ( $p < 0.0001$ ), "indicating that NEP use during the six months before entry is a predictor for HIV seroconversion during follow-up in the cohort... All plausible sociodemographic, behavioral, and drug consumption variables available were examined as potential confounders...the association between NEP attendance and HIV infection persisted... In summary, Montreal NEP users appear to have higher HIV seroconversion rates than NEP nonusers. This study also indicates that at least in Montreal, HIV infection is associated with NEP attendance. These findings cannot be explained solely on the basis of concentration around NEPs of higher risk IDU population with a greater baseline HIV prevalence. Since NEPs have been viewed as a credible preventive intervention for drug users who continue to inject, we believe that caution is warranted before accepting NEPs as uniformly beneficial in any setting."

They followed this statement with a series of disclaimers designed to keep NEP supporters from feeling too discouraged, and then concluded by stating, "Public health authorities have been informed of our findings... Our work firmly suggests that NEP programs should be fine-tuned to local needs. More studies are needed to elucidate the mechanisms implicated on the transmission of HIV around NEPs in Montreal or elsewhere and to further assess the potential advantages of this intervention."

It is important for Oklahoma physicians to know that General Barry McCaffrey, head of the Office of National Drug Control Policy (ONDCP), stated in a letter to the National Institute on Drug Abuse that the federal government should not provide federal funds for needle exchange programs. He emphasized his belief that needle exchange programs did not address the complex behavior in drug use. "It is the judgment of ONDCP that we should not endorse the use of Federal funds (including CDC funds) to support needle exchange programs. Effective drug treatment offers better long-term policy for both drug control and AIDS prevention." Effective law enforcement has been shown to decrease injection drug abuse in a small military community, resulting in a decrease in the number of hospitalizations for drug overdose and in the number of cases of hepatitis B infections.<sup>6</sup>

Resolution 25 cited a study which was an evaluation of 214 published reports that reported seroprevalence information in cities around the world that had NEPs and cities that did not have NEPs.<sup>7</sup>

They also utilized unpublished data from the CDC regarding injecting drug users entering drug treatment in 27 cities in the United States from 1988 to 1993. The study did not evaluate information regarding individual cities before and after implementing NEPs, but simply used an "ecological study design to compare changes over time in HIV seroprevalence in injecting drug users worldwide for cities with and without NEPs." They noted that cities were selected for analysis by the existence of HIV seroprevalence surveys, and bias may have been introduced by the decision to do a survey in a particular city, that HIV seroprevalence may have remained low in some of the cities with NEPs, irrespective of their introduction, and finally that implementation of NEPs was almost certainly confounded by the implementation of other HIV prevention strategies. "Therefore, the difference in rate of changes of seroprevalence between cities with and without NEPs, may not be due solely to NEPs." The weakness of this approach is apparent when compared to the Montreal and Vancouver reports.

Resolution 25 referred to "an impressive body of published literature" which demonstrated cost effectiveness of NEPs in reducing the number of new HIV infections. One study of 221 NEP participants in Baltimore purported to show findings "consistent with earlier reports showing an association between behavioral risk reduction and participation in a needle exchange program,"<sup>8</sup> however, they evaluated a relatively short period of time (six months) in their study. The Vancouver study evaluated over 1,000 NEP participants, and found "little, if any, behaviour change occurred among individuals in our sample who had received an HIV-positive result" compared to a case-control investigation of the same target population approximately two years before their recent report.

Three other studies were referenced<sup>9,10,11</sup> in support of Resolution 25, which were based on various hypothetical, mathematical models dependent on an assumed number of HIV seroconversions which were "prevented" by NEPs. Bruneau et al specifically stated "a direct assessment of the effectiveness of NEPs in preventing HIV infection has been lacking," and their Montreal report, published in December of 1997, revealed the disturbing results that NEPs are apparently not only not effective in decreasing HIV infection, they are strongly associated with increasing HIV infections. This support for Resolution 25, despite being characterized as an impressive body of published literature, is rendered irrelevant because those studies were basing their hypothetical, mathematical models on an inaccurate assumption of the effectiveness of NEPs. Resolution 25 also referred to the

Consensus Development Conference Statement of the National Institutes of Health, but the NIH position that NEPs are effective in HIV prevention and in decreasing risky behavior of IDUs is untenable in view of the new evidence from the Montreal and Vancouver studies.

Researchers in Vancouver refused to conclude that their data proved NEPs were ineffective, but instead, they concluded that NEPs needed to be one part of a comprehensive intervention, "but rather, they lead us to propose that without adequate and appropriate community-wide intervention...stand-alone NEPs may be insufficient to maintain low HIV prevalence and incidence for an indefinite period."

The bias of NEP supporters is also evident in recent criticism of the Montreal study because of supposed "selection bias" implied by a high prevalence of HIV infection in NEP attenders compared to nonattenders at the time of study enrollment.<sup>12</sup> However, the Montreal study used logistic regression analysis, a design that closely resembles an analysis of variance where there are multiple independent variables and a dichotomous dependent variable.<sup>13</sup> The feature which sets this regression model apart from all others is its ability to use a linear combination of explanatory variables to represent the log odds of probabilities, as compared to the expected response in ordinary squares regression.<sup>14</sup> In other words, the Montreal study used a highly powerful method of analysis that takes into account both problems of residual patterns and heteroscedasticity.\*

Due to the sensitive nature of the subject at hand, the authors adjusted for potential confounding variables within the three separate analyses performed on the three independent variables. Thresholds for potential confounding variables related to drug utilization and sexual practices were specified and estimated at either a 10-percent or four-percent level. Multivariate models were then computed by adding the 10-percent level variables into the model followed by the four-percent level variables. Odds ratios were then calculated from all three of the regression models and used to measure magnitudes of associations. When confounding variables present in the study population are accounted for so accurately in the analysis, baseline prevalence rates become irrelevant.

Bruneau and Franco addressed the issue and

their reevaluation "speaks against the possibility of selection bias tilting the association toward lack of benefit for NEPs... In light of these results, we have to stand by our original interpretation and conclude selection bias cannot be playing as severe a role as suspected by Lowndes and Alary. We are fully aware of the potential policy implications of our findings and can only hope that the broader discussion on the putatively preventive effects of NEPs will be grounded more on scientific reasoning than on blind ideology."<sup>15</sup>

Taking into consideration the Montreal and Vancouver reports and the position of the ONDCP, it would seem prudent to exercise caution, as advised by Dr. Bruneau, in consideration of implementing the equivalent of needle exchange programs in Oklahoma. Oklahoma should not rush into a policy, the results of which, in Montreal and Vancouver, have taken many of the experts in drug abuse by surprise.<sup>16</sup>

First, do no harm.

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\* Heteroscedasticity is the term used in statistical analysis when the variance of "y" changes with each value of "x." In the Montreal study, this is important because the design of their study and their methodology of utilizing logistic regression analysis allowed them to control for this problem, to thereby effectively account for the confounding variables in the study. This allowed them to draw the conclusion that participation in the NEP was associated with an increasing rate of HIV seroconversion, and that this could not be blamed on the other variables they evaluated in their study.

## Accreditation by the National Committee on Quality Assurance (NCQA): A Description

Donna Bell; Edward N. Brandt, Jr., MD, PhD

The objective of this article is to describe the National Committee on Quality Assurance (NCQA). The NCQA is one of many organizations that is addressing the issues of quality assurance of health care for HMOs. It is of concern that when HMOs focus on cost they may stint on services. Also it is difficult for HMOs to compete for both quality and cost if there is not a comparable objective standard of measurement. The NCQA offers a level of accreditation that is representative of organizational structure and resources. The Health Plan Employer Data and Information Set (HEDIS) is used to compare outcomes and professional resources. The results of both the accreditation and the HEDIS measures are compiled in a national data base, The Quality Compass. There is skepticism that the NCQA is measuring the correct data for basing quality measurement decisions and also the data obtained is severely underutilized by health care purchasers (employers with less than 1,000 employees).

The need for quality measurement for health care emerges from two historical trends. One of these is the control of costs by a shift from traditional indemnity insurance to managed care, especially Health Maintenance Organizations (HMO). For decades, growth in health care expenditures far exceeded the rate of inflation. In 1929 the cost of health care as a percentage of the gross domestic product was 3.5 percent; it was 15.6 percent in 1995.<sup>1</sup> In 1988 only 27 percent of the population of the United States was enrolled in a managed-care organization (MCO); now nearly two-thirds of employees who receive health care benefits from their employer are enrolled in MCOs.<sup>1,2</sup>

The second trend is the rising effectiveness of demands for the accountability of health care providers. This trend has been aided by the consolidation of purchasing power in the hands of institutions. The purchasers of managed health care, chiefly large employers and governments, are concerned that as health plans compete, they may stint on quality to reduce prices. MCOs have shown that they can contain costs, but not that they can do so without prejudicing the health of their members. As competition among MCOs is driven less by considerations of cost alone and more by quality of service, it is necessary to have an objective standard of comparison. Managers of many health plans believe that formal documentation of the quality of their care by a recognized, independent review body will help increase their share of the insurance market.<sup>3</sup> To serve this need of both purchasers and providers, the National Committee for Quality Assurance (NCQA) was formed.

The NCQA was formed in 1979 by action of the principal associations of managed-care providers; the American Managed Care and Review Association and the Group Health Association of America. (These bodies merged in the fall of 1995 to become the American Association of Health Plans.) They created the NCQA to preempt efforts by the U.S. Department of Health and Human Services (HHS) to regulate health plans at the federal level.<sup>3</sup> It was agreed by many medical directors of health-maintenance organizations (HMOs) that a quality-review board had to be independent of both government and business to be credible.<sup>3</sup> At first HMOs were reluctant to participate, because their competitors in the indemnity sector had no similar standardized quality

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measurement. But under pressure from large employers for assurance of quality care, they became accepting of NCQA.

In 1990, the NCQA became a financially self-sufficient, non-profit organization. By charter, the board members include representatives of purchasers of care, both corporate and individual, and physicians, including HMO medical directors, and representatives of the American Medical Association (AMA). The main source of revenue is accreditation fees that average \$40,000 per survey. Other revenue comes from registration fees for educational and training conferences, projects conducted with states, publication sales, and grants from private foundations.<sup>3</sup>

The NCQA originally accredited only HMOs, but has since extended the scope of its activities to include behavioral health care, credentials verification, and physician organizations.<sup>4</sup>

Accreditation by the NCQA is based on a three- to four-day site visit by a team of reviewers, including physicians, most of whom are HMO medical directors, and support staff. The plan is reviewed against more than 60 quantitative standards, each focusing on a distinct aspect of organizational structure. These standards are classified into the categories shown in Table 1.<sup>5,6</sup> (The proportion of the total score accounted for by each is shown in parentheses.)

The result of the site visit is evaluated by a Review Oversight Committee, which issues a technical accreditation report. The report gives an overview of the plan's resources and organizational structure.<sup>6</sup> On the basis of a scoring system, one of the following designations is made.

**Full Accreditation.** The plan meets NCQA standards and has an excellent program for continuous quality improvement. A three-year period of accreditation is granted.

**One-Year Accreditation.** The plan meets most NCQA standards and has a well-established quality improvement program. The NCQA provides the plan with a list of recommendations and monitors its progress in implementing them.

**Provisional Accreditation.** The plan meets some NCQA standards and has adequate quality improvement programs. This level of accreditation is for one year. This plan must demonstrate improved compliance with NCQA standards before it can receive a higher level of accreditation.

**Denied.** The plan has serious flaws.

**Table 1. Categories of Quantitative Standards**

- 1. Quality Management and Improvement (40%):** How well does the plan monitor the quality of care given to its patients? How well does it coordinate all parts of the delivery system? Are patients assured of access to care in a reasonable amount of time? What improvements are being made in care and administration?
- 2. Credentialing and Recredentialing (20%):** Does the plan meet specific requirements for verifying the credentials of all physicians in its network? Does the plan look for a history of malpractice or fraud? Does the plan keep track of performance of all physicians and use that information for its periodic evaluations?
- 3. Members Rights and Responsibilities (10%):** How clearly does the plan inform patients about how to access health services, how to choose a physician or change physicians, and how to make a complaint? Is the plan responsive to patient satisfaction ratings and complaints?
- 4. Preventive Health Services (15%):** Does the plan encourage members to have tests for early disease detection and immunizations? Does the plan support physician efforts to deliver preventive care? Is the success of preventive care monitored? Is there evidence of improvement where monitoring suggests an opportunity?
- 5. Utilization Management (10%):** Does the plan use a fair and consistent process to decide what services to provide? When the plan denies services, does it respond to patient and physician appeals? Does the plan protect against under-utilization? Are decisions made by qualified persons?
- 6. Medical Record (5%):** To what extent does medical record-keeping meet NCQA standards? For instance, do records show that physicians follow up on abnormal test findings?

**Table 2. Categories of NCQA Criteria**

- Effectiveness of care:** Are the expected gains in health being achieved?
- Access to and availability of care:** Is care available to those who need it, without unnecessary barriers and delay?
- Patient satisfaction:** Is the experience of care satisfying, as well as clinically effective?
- Cost:** Is care cost effective?
- Stability of the plan:** Will organizational change disrupt the continuity of care?
- Patient education and participation:** Is the plan successful at helping patients to be active and informed participants in health care decisions?
- Utilization of services:** How are resources used? Is there evidence of too much or too little care?
- Descriptive information:** What medical specialists are enrolled, and how many?

The results of NCQA accreditation can be accessed on the Internet or by telephone. The information has also been published in the press.<sup>1</sup>

The accreditation process is designed to assess the structure of a health plan for its ability to deliver quality of care. A prospective purchaser also needs objective information about the quality of care actually delivered by competing plans, preferably on a scale that can be compared against cost. The NCQA compiles data that can be used to compare HMOs on the basis of outcomes and professional resources. The Health Plan Employer Data and Information Set (HEDIS), currently in revision 3.0 is a set of standardized criteria that the NCQA applies for this purpose. In the development of these criteria, the NCQA sought to create a database that would provide an objective measure of performance, independent of differences in patient population. The criteria falls into the categories shown in Table 2.<sup>2</sup>

The results of both HEDIS measures and accreditation reviews are compiled in a national database, The Quality Compass, maintained by the NCQA. These data are used to compute national and regional averages and to set benchmarks.<sup>6</sup> The data are sold to employers, health consultants, and the media, and provide a final assessment of a plan's quality across a wide range of measures.

The HMO industry has criticized the NCQA for allowing the media to report Quality Compass data in a way they believe to be unfair.<sup>8</sup> Some plans that have supplied HEDIS information withhold consent for public release of the data, because they are unhappy with how they performed in the past. In 1998, only 292 of 447 HMOs participating in HEDIS allowed their results to be released publicly. The president of the NCQA, Margaret E. O'Kane, has stated "plans that reported publicly outperformed plans that did not across every single measure of performance."<sup>8</sup>

There is still skepticism in HMOs that the NCQA or other accrediting bodies such as the Joint Commission on Accreditation of Healthcare Organizations, the Peer Review Organizations of the Health Care Financing Administration, Utilized Review Accreditation Commission, or the Accreditation Association for Ambulatory Health Care Inc. has succeeded in measuring the quality of health care.<sup>9</sup> Some of the issues are:<sup>10</sup>

- Does the accreditation criteria predict quality?
- How is patient turnover related to satisfaction with the quality of care?
- The separate effects on outcomes of variability in patient populations and variability in the performance of health plans.
- The labor and resource intensifying task of compiling HEDIS data.

Many contingencies can have an effect on outcomes such as the characteristics of the population the HMO serves. The NCQA attempts to take this into account by making a "risk adjustment" in its performance measures. But risk adjustment is a statistical approach, and therefore depends on data provided by other plans. In measuring outcome, it often takes years to determine the effects of an intervention, as for example, in assessing the differences in the incidence of heart disease achieved by managing risk factors. Many patients are not enrolled in a single health plan for a sufficiently long period to permit this assessment. There is also the problem of small numbers. There are many small health plans, and problems with small numbers may limit the validity of results for rare events such as recurrence of cancer.

Many HMOs have weak clinical information systems; they use computers efficiently for billing, but medical records are kept on paper.<sup>2</sup> The fourth volume of HEDIS 3.0 communicates to the managed care industry the upgrades in information systems necessary to improve performance measurement at an acceptable cost.<sup>2</sup>

There is also concern that adjustments are not made to tolerate a lower standard of care for those, such as the poor, who are at higher risk.

The task of providing a "gold standard" for health care is complicated by the fact that there is no universally accepted model of the ideal delivery system.<sup>9</sup> There are serious and widespread quality problems throughout the American health care system. It still includes the provision of unneeded services, denial of needed services, and misuse of services.<sup>9,11</sup> There is also inconsistency in treatment of the same disease.<sup>12</sup>

The NCQA is addressing many of the criticisms that have been made by its constituents. It is not only measuring the current performance of HMOs but also looking to future needs. It invites interested parties to participate in the committees that set future directions. It has eliminated redundancy in quality assessment by offering standards for Medicare and Medicaid as well as the private sector within the HEDIS

3.0 formula. It provides leadership to HMOs in developing clinical information systems that will not only apply to billing, but will improve patient care.

Data gathered from HMOs should make it possible to establish what treatments work best and are most cost effective.<sup>13</sup> Preventive services and data collection that once were the responsibility of state public health departments may in the future be delegated to HMOs.

The greatest obstacle the NCQA has to overcome is the effective implementation of its program in the health care market. A study released in 1998<sup>8</sup> by a large accounting firm found that only 11 percent of 1,501 employers considered NCQA accreditation very important when selecting an HMO, and five percent considered HEDIS data very important. Among employers with fewer than 1,000 workers, 10 percent were familiar with HEDIS, and two percent used it to make a decision.<sup>8</sup> The following is a local perspective of NCQA reviewed HMOs; BlueLincs HMO, Cigna HealthCare, CommunityCare, PacifiCare of Oklahoma, PruCare Oklahoma and Tulsa. Two other quality measuring organizations, Utilized Review Accreditation Commission (URAC) and Accreditation Association for Ambulatory Health Care, Inc. (AAAHC), reviewed Foundation Health and HealthCare Oklahoma respectively.

Although NCQA accreditation is a great tool, it needs to be made available to the true beneficiary, the patient. The NCQA needs to promote itself directly to the public, like the manufacturers of prescription drugs, to create a grassroots demand for accountability. The NCQA must make itself a household name synonymous with quality health care. □

## The Authors

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# HISTORICAL FEATURE

## A History of the Oklahoma Medical Research Foundation

A history of the Oklahoma Medical Research Foundation is a reflection of the growth of the state of Oklahoma. It is a story of people—researchers and physicians who have dedicated their lives to discovering the causes of disease in humans, and the citizens of Oklahoma who continue to open their hearts in support of this important work.

The story begins toward the end of World War II. Americans were searching for new, peaceful outlets for the immense energy that had characterized the war effort. Members of the Alumni Association of the University of Oklahoma School of Medicine wanted to attract new medical personnel, particularly those with an interest in research, into the state. With this in mind, they evaluated the existing facilities available in the medical center. This analysis revealed one significant deficiency; there was no medical research facility where medical personnel could undertake original and creative research, but that would soon change.

Oklahoma physicians rallied together with business and civic leaders to lead a community fundraising effort with the mission of creating excellence in the area of biomedical research. In 1946, the Oklahoma Medical Research Foundation was chartered, and the recruitment of top-quality scientists coupled with outstanding facilities set the foundation for its rise to being one of the premier private research facilities in America. Sir Alexander Fleming, the eminent British scientist who discovered penicillin, dedicated OMRF's first building in 1949. In 1970, Dr. Colin MacLeod, a co-discoverer of the structure of DNA, became OMRF's first full-time president.

From 1979 to 1997, Dr. William Thurman, former provost of the University

### The 1940s...When It All Got Started

At the Dedication Ceremony of the first building, Sir Alexander Fleming said:

*"Here today in Oklahoma City you are giving birth to a new medical research foundation. Who knows what it is going to bring forth. You might call it a frightful gamble, just as it is a gamble when a baby is born into this world, or when a bore is sunk for oil."*



Dr. Ray Balveat was a member of the Endowment Committee, which was the given the task of identifying the few, but needs and propose a plan to address them, which led to the founding of the Oklahoma Medical Research Foundation.

*"My father was one of the first five allergists in the US. He had to do his own research on allergic disorders, including hay fever and asthma. I feel certain this interest in basic research and the lack of any facilities in this state played a key role in his involvement."*

H.J. Balveat, MD  
Oklahoma State University  
Dean, A. M. Hughes Institute

of Oklahoma Health Sciences Center, provided the visionary leadership that led to the Foundation's growth from a budget of \$10 million to \$25 million per year.

OMRF has grown in size and stature to become one of the nation's premier biomedical research institutions, earning national and international recognition for its scientific research programs.

**1944:** The Alumni Association appoints a committee to investigate the need for a medical research facility. Dr. Tom Lowry, dean of the School of Medicine, appoints an Endowment Committee, and the long, arduous task of raising money begins.

**1946:** On August 28, the Oklahoma Medical Research Foundation is chartered as a charitable, not-for-profit research and training organization for medical science. OMRF's stated purpose is to promote the improvement of human health and well being.

**1947:** Mr. Hugh Payne, Sr., of Lawton, is named OMRF's first general manager.

**1948:** More than \$2,350,000 is raised for construction and operational support. The Oklahoma State legislature deeds a plot of land directly east of the medical school to be used as a building site. A 41-member Board of Directors is formed to assume administrative responsibility for the foundation.

**1949:** The Board of Directors authorizes construction of a 50-laboratory research building (OMRF's current main laboratory building). Dedication ceremonies feature Sir Alexander Fleming, the British scientist who discovered penicillin.

Editor: Nancy R. Smith, Editor-Magazine  
Oklahoma Medical Research Foundation  
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Foundation.

Under Dr. Thurman's leadership, the Foundation saw a wealth of activity, both in the construction of laboratory space and other needed facilities and in the world-class research its scientists produced.

In 1997, OMRF's future was tendered into the hands of internationally recognized immunologist J. Donald Capra, MD, as president and scientific director after the retirement of Dr. William Thurman.

Dr. Capra came to the Foundation from the University of Texas Southwestern Medical Center in Dallas, where he held the Edwin L. Cox Distinguished Chair in Immunology and Genetics, was professor of microbiology and internal medicine, and directed Southwestern's Molecular Immunology Center. His research focuses on the immune system at the molecular level, which is yielding valuable data that has a broad range of clinical applications in treating, managing or detecting various diseases, including leukemia, lymphoma and juvenile diabetes.

Dr. Capra's vision for OMRF is inclusive and far-reaching; his commitment to maintaining and enhancing the Foundation's status of biomedical research excellence and forming new and collaborative relationships is a solid foundation upon which growth and expansion can continue.

Whatever tomorrow holds, Oklahoma, the Oklahoma Medical Research Foundation, its Board of Directors and scientists—the dedicated men and women who make up the “real” OMRF—will continue contributing to our knowledge of how things work—things that affect our health and quality of life—to the treatment of diseases that have long plagued mankind. They share one common goal “...that more may live longer, healthier lives.”



Dr. J. Donald Capra  
photo by David Fitzgerald

## The 1950s...

### Labs Open, Discoveries Begin

**1950:** The first 40 laboratories are ready for use. Plans are made for additional construction.

**1952:** A 16-bed hospital ward is completed where clinical studies are conducted. Funds from National Institutes of Health grants are supplemented by individual contributions from throughout the state.

**1959:** History is made when Dr. Jordan Tang, then a laboratory assistant in Dr. Stewart Wolf's program, discovers gastricsin, the second enzyme ever identified in human gastric juice.

## The 1960s...

### Growth and Financial Stability

**1964:** Three additional floors of laboratories, an outpatient clinic and an expanded hospital ward are completed. The \$1.0 million needed to finance this expansion is secured from three sources: the U.S. Public Health Service (56.4%), OMRF operating funds (24.8%), and pledges from the public (18.8%). The foundation's staff has grown to 200 employees, and the budget is \$1.3 million.

**1966:** J.A. and Leta Chapman establish trusts that are to become the lifeblood of the foundation. They began their support in 1949, but when the second Chapman Trust began supplying funds, it provided financial stability not previously present.

## The 1970s...National Recognition

**1970:** Dr. Colin McLeod chairs a five-member Evaluation Committee appointed to review OMRF's scientific scope and focus and the feasibility of continuing to operate the hospital. McLeod, who gained national recognition for his role in the discovery of DNA, becomes OMRF's first full-time, salaried president in December.

**1971:** The Graduate Education Program is established to help develop talent in a wide variety of research areas. Dr. Reagan Bradford is appointed head of the Cardiovascular Research Program, whose major thrust is chemotherapy—drug therapy—in several types of cancer. OMRF constructs a freestanding office building, the Rogers Building, named for the foundation's longtime friend and benefactor, John Rogers of Tulsa.

**1972:** The lipoprotein classification and naming system developed by Dr. Petar Alaupovic, head of OMRF's Lipid and Lipoprotein Laboratory, is adopted by scientists and physicians worldwide. Of the six families known when he created his system, three were discovered in Alaupovic's laboratory. Dr. Paul McCay is named head of the Biochemistry Section. His work focuses on the effect of diet, particularly dietary fats, on the incidence and possible control of cancer.

**1973:** Dr. B. Connor Johnson is named head of a specialized group—the Vitamin and Nutrition Research Laboratory. Dr. Johnson is a recognized authority on vitamins A, B, and K.

**1974:** Dr. Clayton S. White, from the Lovelace Clinic and Foundation in Albuquerque, New Mexico, becomes OMRF's second full-time President.

**1977:** A center research wing connecting the east and west wings of the main building is completed.



Dr. William G. Thurman  
photo by John R. Williamson

**1979:** Dr. William G. Thurman assumes the position of OMRF's third President and chief executive officer. The original Omar B. Milligan Research Library is dedicated.

## The 1980s... OMRF Supports Education

**1981:** The Ben C. Wileman Learning Center (an auditorium with complete support facilities and seating for 150) and the Roy C. Lytle Foyer are completed. Mr. Wileman is chairman emeritus of the Board of Directors. Mr. Lytle, now deceased, was volunteer general counsel to the foundation for several years. Dr. Morris Reichlin is named head of OMRF's new Arthritis and Immunology Research Program. He takes an immunological approach to the study of arthritis and other rheumatoid diseases.

**1982:** The Cardiovascular Research Program has turned to the study of heart attack on the cellular level - the chemical changes that take place in the heart during and after a heart attack. Dr. Fletcher Taylor is named head of the program.

**1983:** After 35 years of service to the foundation, Dean A. McGee (Kerr-McGee Corporation) steps down as chairman of the Board of Directors. Edward L. Gaylord, President of Oklahoma Publishing Company, succeeds him as chairman. Completion of the Acree Woodworth Cardiovascular Research Building introduces the concept of a "north side" of the campus.

**1984:** The Milligan Center is completed. It houses the Omar B. Milligan Research Library, the James H. Milligan Electron Microscopy Suites and the Darlene Milligan Plaza. Mrs. Margaret Milligan, Omar's widow, has endowed the library, thereby involving the total family in the support of OMRF.

Students and a teacher connect to OMRF's computer network through the Oklahoma TeleScience Network.

*photo by David Fitzgerald*



**1988:** The Ed F. Massman Cancer Research Building, housing the Molecular and Cell Biology Research Program, is completed. Dr. Philip Silverman comes from Albert Einstein College of Medicine in New York to become head of this new program. Dr. Charles Esmon is named Oklahoma's first Howard Hughes Medical Institute Investigator and is the first named outside a university setting. The Foundation Scholar Program for high school science teachers, patterned after the Fleming Scholar Program, is established.

## The 1990s... Better than Ever

**1991:** Dedication ceremonies are held for the William H. Bell Building, which is named in honor of the Tulsa attorney and long-time member of the Board of Directors. This building houses several administrative offices and additional research laboratories. Dr. Robert Floyd discovers that a compound called PBN can reverse brain aging in gerbils. Dr. Charles Esmon is named head of the Cardiovascular Biology Research Program.

**1992:** Dr. Robert Floyd is named head of the Free Radical Biology and Aging Research Program. Dr. Jordan Tang develops a gene that stops the growth of the AIDS virus in culture.

**1993:** OMRF licenses technology for BAL, an enzyme involved in the metabolism of fat and a constituent of breast milk, which was discovered, characterized and cloned by Drs. Chi-Sun Wang and Jordan Tang.

**1994:** The Oklahoma TeleScience Network is established, linking Oklahoma's high school teachers and students with OMRF's computer network and the Internet. OMRF is among 42 institutions nationwide to receive a five-year grant from the Howard Hughes Medical Institute for a summer training program in biomedical research for Oklahoma high school science teachers. The Women's Health Research Program is established.

**1995:** A test for measuring a blood factor that may be present in people at high risk for heart disease is developed by Dr. James Morrissey. Drs. Ron and Joan Conaway discover a key element in the understanding of the von Hippel-Lindau (VHL) suppressor gene, whose loss of function results in predisposition to cancer, particularly kidney cancer. The Cardiovascular Biology Research Program receives a \$5.6 million, five-year program project grant from the National Institutes of Health to study issues related to heart attacks, strokes, vascu-

lar disease, blood clots, septic shock and other diseases of blood vessels. The National Lupus Registry and Repository is established through a \$5 million contract from the National Institutes of Health. Dr. Allen Edmundson is recruited to head the Protein Crystallography Program.

**1996:** One of the seven genes that cause a type of leukemia is identified in the Conaway laboratory. The Conaways receive the American Society of Biochemists and Molecular Biologists' Amgen Award. The Omar B. Milligan Library is remodeled. The American College of Rheumatology names Dr. Morris Reichlin, head of the Arthritis/Immunology Research Program, recipient of the Distinguished Investigator Award. The American Aging Association presents its 1996 Research Award and gold medal to Dr. Robert Floyd for his accomplishments in the field of aging research.

# Did You Know That...

OMRF is an independent, not-for-profit, publicly supported institution dedicated to basic biomedical research with the goal of helping all people live longer, healthier lives. OMRF is the only private biomedical research facility in the state; it is not part of any university or state agency and consequently receives no state-appropriated money.

Because OMRF's administrative expenses are paid by a charitable trust, 100 percent of all other donated funds are used to support scientific research. This means that *every dollar donated to OMRF is spent only on research, not on administrative costs.*

OMRF employs more than 400 people—80 of whom hold advanced degrees (MD, PhD and MD/PhD)—as well as administrative, technical and support staff. Laboratory space accounts for 160,000 square feet of the 200,000 square-foot complex.

OMRF's Protein Crystallography (structural biology) Laboratory is the only one of its kind in the state of Oklahoma. It provides crystallography services for scientists in several programs at OMRF and the Oklahoma Health Center, as well as others across the state.

The Foundation is located in the heart of the Oklahoma Health Center in Oklahoma City. The OHC is the largest concentration of medical, research and health-related expertise in the state of Oklahoma, encompassing 18 entities and 6,000 employees. OMRF occupies three city blocks across from the University of Oklahoma Health Sciences Center and is surrounded by three teaching hospitals.

OMRF is separate from the University of Oklahoma, but complementary in its goals. Both entities benefit from ongoing scientific collaborations; however, as a single-mission research institute, OMRF derives no direct financial benefit from any gift made to the University.

Several OMRF scientists have ongoing collaborations with scientists at the University of Oklahoma in Norman and Oklahoma City, Oklahoma State University and the University of Tulsa. Many OMRF scientists were trained by and continue to collaborate with scientists from Stanford, Harvard, Duke, Yale, Oxford, and other nationally and internationally recognized institutions.

OMRF conducts a scientific audit each year by bringing in a panel of distinguished scientists, or Scientific Board of Visitors, from across the United States to evaluate our scientific programs. Their assessment ensures that all OMRF programs maintain the highest level of research quality.

## **The Oklahoma Medical Research Foundation is a private, not-for-profit biomedical research facility specializing in several research areas.**

Head of the Arthritis/Immunology research program is **Dr. Morris Reichlin**, studying lupus, rheumatoid arthritis, and scleroderma.

Head of the Cardiovascular Biology program is **Dr. Charles Esmon**, which includes heart attack, blood diseases, stroke and septic shock areas of interest.

**Dr. Carl Manion** is the head of the Clinical Pharmacology program, which includes FDA drug trials for hypertension, cholesterol, asthma, and others.

Looking at genetic disorders (genetic engineering), Down syndrome and obesity is **Dr. Brian Sauer**, head of the Developmental Biology research program.

**Dr. Robert Floyd** is head of the Free Radical Biology and Aging program, studying Alzheimer's disease, Parkinson's disease, and stroke.

Overseeing the Immunobiology/Cancer program is **Dr. Paul Kincade**, who is studying leukemia, Hodgkins' disease, lymphoma, and breast cancer.

**Dr. Philip Silverman** is head of the Molecular/Cell Biology research program, studying ALS, muscular dystrophy, multiple sclerosis, and new antibiotics.

Not only is **Dr. J. Donald Capra** the president and scientific director, he is also head of the Molecular Immunogenetics program, researching diabetes, AIDS, and immune system disorders.

Looking into drug design and structural studies is **Dr. Allen Edmundson**, head of the Protein Crystallography program.

The Protein Studies program head is **Dr. Jordan Tang**, who is studying AIDS, HIV, diabetes, ulcers, and cystic fibrosis.

# WORTH REPEATING

The following letter was sent to the editors of 43 Oklahoma newspapers by Dr. Mary Anne McCaffree during her presidency of the OMSA. The letter, which criticizes the federal government's recent effort to expose Medicare fraud, appears as printed in *The Daily Oklahoman*, March 3, 1999.

## Medicare Fraud Campaign Misguided

Recently the U.S. Department of Health and Human Services, AARP and the Department of Justice joined forces in an aggressive national Medicare "fraud" campaign. The project encourages Medicare beneficiaries to call a toll-free fraud hotline if they suspect any improper billing by their physicians, hospitals or other health care providers.


It was launched at a press conference in Washington, DC, and four other cities. This was followed, according to reports, by training "ralies" for thousands of volunteers in 100 locations nationwide featuring Hollywood-style videos and marching orders from FBI agents.

The American Medical Association (AMA) issued a strongly worded media statement denouncing the campaign, calling it "ill-focused and simplistic." An editorial written by AMA President Dr. Nancy Dickey also ran in the Feb. 24 *Wall Street Journal*. The full text of the AMA's statement and Dr. Dickey's article are available on the AMA web site at [www.ama-assn.org](http://www.ama-assn.org).

The Oklahoma State Medical Association supports the efforts of the AMA in opposing this campaign. Like the AMA, we maintain a zero-tolerance policy regarding genuine fraud. However, it is our firm belief that this campaign undermines the bond of trust essential to a sound doctor-patient relationship.

We support the AMA's contention that the government could better use its resources to simplify, clarify and explain the more than 100,000 pages of Medicare rules and regulations so that genuine fraud could more easily be distinguished from mere error. We also are concerned that such a misguided effort could have a chilling effect on Oklahoma physicians who elect to participate in the Medicare program.

Most of all, however, we find the concept of deputizing senior citizens as vigilantes and bounty hunters to be repugnant on its face and believe it to be a genuine disservice to all Medicare patients and their physicians throughout this country.



Mary Anne McCaffree, MD  
President, 1998-1999, Oklahoma State Medical Association

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the conclusions directly supported by these findings.

Bylines may contain no more than six (6) names and should include only those individuals who can attest that they have contributed to the conception and design, or analysis and interpretation of data; and to drafting the article or revising it critically for important intellectual content; and to final approval of the version to be published. Other contributions may be recognized in an acknowledgment.

References are to be listed in the order of their appearance in the article, and in the style used in both the *JOURNAL* and in *JAM* (author, title, publication, year, volume number, pages). Footnote bibliographies, and legends for illustrations should be on separate sheets.

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# Oklahoma State Medical Association

## Continuing Medical Education

Course offerings from OSMA Accredited Institutions

### OSMA Accredited Institutions:

Deaconess Hospital  
Oklahoma City

Duncan Regional Hospital  
Duncan

Hillcrest Medical Center  
Tulsa

Institute for Mental Health  
Oklahoma City

Integris Baptist Medical Center  
Oklahoma City

Integris Southwest Medical Center  
Oklahoma City

Jane Phillips Medical Center  
Bartlesville

Mercy Health Center  
Oklahoma City

Norman Regional Hospital  
Norman

Orthopaedic & Reconstructive  
Research Foundation  
Oklahoma City

St. Anthony Hospital  
Oklahoma City

Saint Francis Hospital  
Tulsa

St. John Medical Center  
Tulsa

Stillwater Medical Center  
Stillwater

Valley View Hospital  
Ada

#### Deaconess Hospital

Cyndi Nelson - 405-604-4979

|          |                   |      |        |
|----------|-------------------|------|--------|
| May 17th | Thyroid Disorders | 6:30 | 1 hour |
|----------|-------------------|------|--------|

#### Integris Baptist Medical Center

Rikki Caraway - 405-949-3284

|               |                        |      |             |
|---------------|------------------------|------|-------------|
| May 7, 21, 28 | Tumor Board            | 7 am | 1 hour each |
| May 10th      | Diabetic Keto Acidosis | 7 am | 1 hour      |
| May 14th      | Gene Update            | 7 am | 1 hour      |
| May 18th      | Updates in Retina      | 7 am |             |

#### Mercy Health Center

Debbie Stanila - 405-752-3806

|                |  |              |         |
|----------------|--|--------------|---------|
| May 6th        | Do Hormones Still                              |              |         |
|                | Sound the Same                                 | 12:15-1:15   | 1 hour  |
| May 13th       | Prevention of Diabetes in                      |              |         |
|                | Special Populations                            |              | 1 hour  |
| May 20th       | State of the Art Plastic Surgery               |              | 1 hour  |
| May 27th       | Confronting the Threat of Fracture:            |              |         |
|                | Recent Advances in Therapy Proven              |              |         |
|                | to Prevent Fracture                            |              | 1 hour  |
| May 5,12,19,26 | Tumor Board                                    | 7-8 am       | 1 hour  |
| May 18th       | NeuroScience Institute                         |              |         |
|                | Lecture Series                                 | 7-8 am       | 1 hour  |
| May 15th       | 46th Annual James Hammarsten Pulmonary Disease |              |         |
|                | Conference                                     | 7:30-4:30 pm | 6 hours |

#### St. Anthony Hospital

Sandy Coury - 405-272-6358

|         |  |           |        |
|---------|--|-----------|--------|
| May 5th | Ultra Sonography Utilized for the Diagnosis of Gyn |           |        |
|         | Malignosis   | Noon-1 pm | 1 hour |

#### Irwin Brown Office of Continuing Medical Education

Leticia Harris - 405-271-2350

|           |   |          |
|-----------|---|----------|
| May 1st   | Stepping Up Women's Healthcare                  | 7 hours  |
|           | Oklahoma Pathology Update V                     | 6 hours  |
|           | 7th Annual Review Course in                     |          |
|           | Anesthesiology                                  | 14 hours |
| May 7th   | Gamma Knife Conference                          | 5 hours  |
| May 11th  | PLICO Loss Prevention Seminar                   | 2 hours  |
|           | Caring for Infants/Toddlers                     |          |
|           | With Disabilities (CFIT)                        | 3 hours  |
|           | Polypharmacy and Aging                          | 7 hours  |
| May 14th  | PLICO Loss Prevention Seminar                   | 2 hours  |
| May 18th  | Caring for Infants/Toddlers                     |          |
|           | With Disabilities (CFIT)                        | 3 hours  |
| May 21-22 | Non Melanoma Skin Cancer: Oklahoma              |          |
|           | Academy of Otolaryngology-Head and Neck Surgery |          |
|           | Annual Meeting                                  | 7 hours  |
| May 25    | PLICO Loss Prevention Seminar                   | 2 hours  |

*For information regarding a listed course, call the appropriate contact.  
For information regarding CME requirements or becoming an accredited  
provider, call Barbara Matthews, OSMA CME Coordinator at 405-843-9571.*

# The State of the State's Health

## A Report from the Oklahoma State Board of Health

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Creating a State of Health

### Introduction

The State Board of Health presents its third annual report to the citizens of Oklahoma. Our first report concluded: "Oklahoma has the unfortunate distinction of being above national rates for most of the key public health status indicators (age-adjusted death rates, death rates for leading causes of death, years of potential life lost)." Data in our second report revealed that "We are even losing ground compared to the rest of the United States." It continued, "This means that our citizens are overburdened with disability and unnecessary death; our health care systems, both public and private, are stressed, and our economy is impaired." The state of our state's health is thereby jeopardized. These facts have caused considerable concern in numerous individuals and groups, and appropriately so.

Recently, a report produced by the ReliaStar Financial Corporation, which annually ranks the health status of all states, demonstrated that only Oklahoma experienced a decline in health status since 1990, dropping from 27<sup>th</sup> in 1990 to 44<sup>th</sup> in 1997. Primary reasons given were: increases in infectious diseases, a reduced high school graduation rate, lower coverage of health insurance, increase in violent crime rates, high smoking/tobacco use rates, and reduced support for public health care. Only Arkansas and Oklahoma experienced an increased total mortality during this time. Furthermore, Oklahoma failed to match many of the improvements experienced by other states, including below average drops in infant mortality, heart disease, and motor vehicle deaths.

In the past two years, however, Oklahoma has made commendable efforts that have shown promise for improving the state of the state's health. A few of the examples include:

- The **1997 Seat Belt Law** allowing police officers to issue a citation to a vehicle driver when a front seat occupant is unrestrained (primary enforcement).
- The **Turning Point Initiative**, a community-based health assessment and prevention initiative to develop partnerships and programs to build healthy communities in Oklahoma.
- The **Children First Program**, a statewide child abuse prevention program.
- The **Schools for Healthy Lifestyles Program**, a school-based comprehensive health education and promotion program in selected elementary schools in Oklahoma City.
- Implementation of the first statewide hepatitis A school vaccination program in the United States.

This *State of the State's Health Report* further refines our examination of public health indicators and trends, and examines certain critical issues, particularly those related to the health of our younger population.

The report concludes with an initial action agenda that could further mitigate some of the negative trends that Oklahomans are experiencing.

### Health Status Indicators Leading Causes of Death

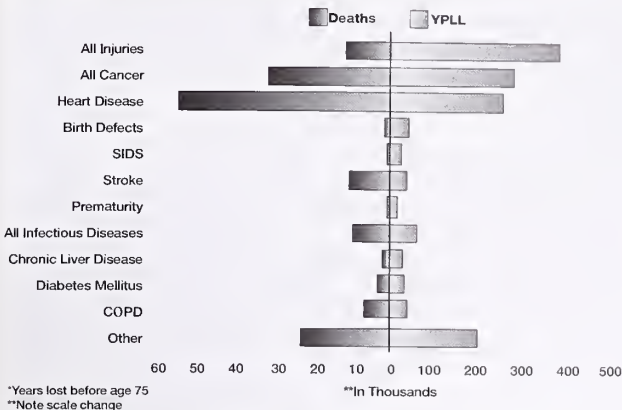
In Oklahoma, approximately 33,000 deaths occur annually. The leading causes of death are: heart disease (34 percent), cancers (22 percent), injuries (7 percent), stroke (7 percent), and chronic obstructive pulmonary disease (5 percent) (Figure 1). The leading causes of *premature death*, indicated by years of potential life lost (YPLL) before age 75, are: injuries (27 percent), cancers (20 percent), heart disease (19 percent), infectious diseases (6 percent), and birth defects (3 percent).

Until 1989, Oklahoma's overall death rate was lower than the U.S. (Figure 2). The national death rate declined 16 percent since 1980. Oklahoma's rate declined and then began to increase after 1984. Among the five leading causes of death: the injury death rate in Oklahoma is 24 percent above the national average; chronic obstructive pulmonary disease (COPD), heart disease, and stroke are 18 percent, 17 percent, and 13 percent, respectively, above the U.S. rate; and the cancer death rate is essentially the same as the national rate. County-specific death rates are found in Figure 3 and additional county data regarding YPLL are found in the Appendix.

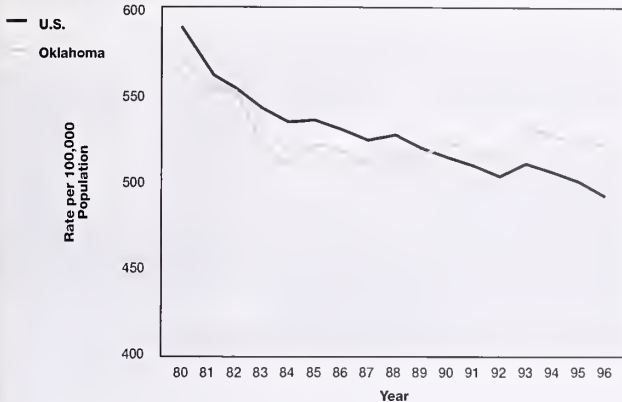
Analyzing trends in Oklahoma, we find there have been substantial declines in heart disease, stroke, and injuries, though the decline in heart disease was substantially lower than the U.S. decline (Figure 5). In addition, cancer rates have increased slightly while the rate in the rest of the nation has declined. Finally, COPD rates in Oklahoma have actually increased significantly more than in the rest of the U.S. (Figure 5).

Further analysis of average death rates in Oklahoma for 1980-1984 compared to 1993-1997 show significant *increases* for septicemia (73 percent), diabetes (33 percent), pneumonia (24 percent), and lung cancer (11 percent). There are also differences across certain race-gender groups. Lung cancer deaths for females were 31 to 52 percent higher in 1993-1997 compared to 1980-1984, while the death rate among males decreased. Additionally, black males had a 30 percent increase in deaths from colon cancer, Native American males had a 38 percent increase in prostate cancer deaths.

**Figure 1. Number of Deaths and Years of Potential Life Lost\* (YPLL) Oklahoma, 1993-1997**



**Figure 2. Age-Adjusted Death Rates for All Causes, Oklahoma and U.S., 1980-1996**



and Native American and black females had a 37 percent and 21 percent increase, respectively, in breast cancer deaths.

On the other hand, we find *decreasing* death rates over the last 18 years for acute myocardial infarction (48 percent), perinatal conditions (37 percent), unintentional injuries (25 percent), and congenital birth defects (22 percent). Again, there is substantial variation in these declines across selected race-gender groups. Native American males experienced the greatest decline in stroke deaths (32 percent). Death rates for acute myocardial infarction decreased over 50 percent among black females and white males. Unintentional injury rates decreased 42 percent and 43 percent, respectively, for black and Native American males. Finally, death rates for birth defects decreased among all race-gender groups except for Native American males, who experienced a 16 percent increase.

**Socioeconomic Issues**

Why have Oklahoma's overall death rates been increasing over the last 13 years? One answer is the relationship between socioeconomic status and health. *Poverty* is a major predictor of health status. Nationally, poorer, *less-educated* adults are more likely to be uninsured, have higher death rates for all major causes of death, and have a higher prevalence of adverse health risk factors, such as sedentary life style and nicotine addiction (cigarette smoking). Socioeconomic status influences the health of children. Children in lower income families are more likely than children in higher income families to be without health insurance and a regular source of health care. Infants born to mothers who did not finish high school are about 50 percent more likely to be of low birthweight than infants whose mothers finished college.

The proportion of Oklahoma's population with poverty level incomes has been higher than the national average since 1985. In 1997, per capita personal income in Oklahoma was 25 percent below the national average. In 1981 and 1982, we matched the nation, but unfortunately, we have done worse ever since. Figure 4 displays the economic profiles of counties in Oklahoma. Note the similarity of counties considered "poorer" or "poorest" with the distribution of higher death rates across counties in Figure 3.

**Behavioral Risk Factors**

In the U.S., *cigarette smoking* (nicotine addiction) among adults 25 years of age and over declined between 1974 and 1995. In 1997, the Centers for Disease Control and Prevention (CDC) reported that Oklahoma's adult smoking rate was 24.6 percent, compared to a median of 23.2 percent for all states. Oklahoma has the ninth-highest smoking-attributable death rate in the country, resulting in over 6,000 premature deaths each year, more than from any other single cause. Over three-quarters of all adult smokers in Oklahoma became regular smokers during their teenage years. About two of every three adult smokers in Oklahoma report that they would like to quit. The total estimated costs of tobacco use in Oklahoma exceed \$1 billion annually, including \$390 million in direct medical costs. Oklahoma's per capita sales rate was 111.8 cigarette packs in 1997 compared to a national median of 90.0 packs.

An estimated 970,000 Oklahomans, or 29 percent of the adult population, are *severely overweight* or *morbidly obese*. Obesity substantially raises the risk of morbidity from high blood pressure, blood cholesterol or triglycerides, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apneas, and endometrial, breast, prostate, and colon cancers. Some studies have suggested being *severely overweight* or *morbidly obese* may be the second leading cause of preventable death in the United States.

In 1997, 50 percent of the live births in Oklahoma were reported to be unintended at the time of conception, including 39 percent mistimed and 11 percent unwanted. Seventy-five percent of all unintended pregnancies occur to adult women (37 percent married, 37 percent age 35 and older). Women who experience an unintended pregnancy are at increased risk of giving birth to a low birth weight infant and experience medical complications. A child from a family with two unplanned births is 2.8 times more likely to have been abused than is a child from a family with no unplanned births.

Approximately 50 percent of Oklahomans have *firearms* in their homes. From 1993 to 1997, firearms were used in 59 percent of homicides and 68 percent of suicides, representing 2,519 lost lives. There is nearly a 5-fold increased risk of a suicide occurring in homes with firearms as compared to those with no firearms. If current trends continue, firearm-related deaths will exceed deaths from motor vehicle crashes in the U.S., a trend already noted in Oklahoma County.

Adult *seat belt use* in Oklahoma increased from 46 percent in 1993 to 60 percent in 1997. However, in 1997, 71 percent of persons killed in traffic crashes were not wearing seat belts; alcohol contributed to at least 28 percent of these motor vehicle-related deaths. Seat belts are 45 to 60 percent effective in reducing death or serious injury in motor vehicle crashes and child safety seats are 67 to 71 percent effective. If seat belt use in Oklahoma increased to 80 percent, 120 deaths and more than 2,600 injuries would be prevented, saving our state an estimated \$174 million. Our state legislature, committed to safety, passed a primary enforcement requirement for Oklahoma's seat belt law in 1997. Perhaps direct action such as this will move us in the direction toward decreasing death and disabilities in our state, especially among our youth.

**Youth Issues**

Influencing the behavior and health of our children and young adolescents may offer the greatest hope for changing the long-term health status of Oklahomans. Among infants younger than 12 months, birth defects, sudden infant death syndrome, prematurity, and complications associated with birth are the overwhelming causes of death. Between 1 and 14 years of age, the leading causes of death are injuries caused by events such as: motor vehicle crashes, burns, drownings, and child abuse. Among adolescents and young adults, there are alarming increases in the numbers of motor vehicle crash deaths, suicides and homicides; black adolescents and young adults are 2-5 times more likely to be murdered than the next two leading causes of death (unintentional and self-inflicted injuries).

Unlike the majority of other states, there is very little data in Oklahoma concerning risk behaviors, or, the types of nonfatal or potentially disabling conditions among our youth. The Oklahoma Drug and Alcohol Policy Board, composed primarily of law-enforcement officials, recently endorsed a legislative proposal to require all of Oklahoma's school districts to collaborate with the Oklahoma State Department of Health in gathering factual information about the behaviors and attitudes of our teenagers. Such surveys could help educators and public health professionals focus on the most important problems facing our youth. In 1997, the Oklahoma Board of Health determined that four conditions (tobacco addiction, motor vehicle crash injuries, suicides, teen pregnancy) were of particular importance to the health of our youth and should be priorities for action in Oklahoma.

**Tobacco Addiction**

Currently, the only way to estimate tobacco use by youth in Oklahoma is to examine data available through national surveys, such as the Youth Risk Behavior Surveillance Survey (YRBSS), conducted each year in most states across

the nation. Among high school students, it is reported that 31-38 percent currently smoke cigarettes. Another study that analyzed 1994-1997 data from the National Household Survey on Drug Abuse (NHSDA) estimated that each day more than 6,000 persons under the age of 18 years try their first cigarette and more than 3,000 become daily smokers. Daily smoking almost certainly leads to nicotine addiction. Other study findings include the following:

- In 1996, more than 1.8 million Americans became daily smokers, of which an estimated 1.2 million (66 percent) were under the age of 18 years; the rate among adolescents increased by 73 percent from 1988. If the rate of smoking initiation among young people had held constant since 1988, 1.5 million fewer persons under the age of 18 years would have become daily smokers by 1996.
- In the 1960s and 1970s, the rate of first daily smoking was highest for persons aged 18-25 years. Since the late 1980s, however, the rate of first daily smoking was similar for both adolescents aged 12-17 years and young adults aged 18-25 years and the incidence of first use of cigarettes per 1,000 potential new users among 12-17 year olds has been steadily higher than for persons aged 18-25 years.
- Children who start smoking are three times more likely to continue to smoke well into adulthood and to experience significantly higher rates of chronic obstructive pulmonary disease, heart disease, and lung cancer.

### Motor Vehicle Crashes

More than 200 Oklahoma children and young adults under 25 years of age are killed each year in motor vehicle crashes (MVC). Teens have the highest MVC death rates in the state and 40 percent of all deaths among 15-19 year olds result from traffic crashes. The risk of crash involvement per mile driven among drivers 16-19 years old is 4 times higher than the risk among older drivers and the risk is highest at age 16-17 years. Crash rates are high largely because of a combination of youth driver immaturity and driving inexperience. Crashes involving young drivers typically are single-vehicle crashes and primarily run-off-the-road crashes that involve driver error and/or speeding. The national YRBSS found that one-fifth to one-quarter of teens across the nation reported riding in motor vehicles without using seat belts and approximately 2 in 5 have ridden with drivers who have consumed alcoholic beverages. A preliminary study in Oklahoma, based on a sample of youth in schools who volunteered for the survey, suggests that Oklahoma rates may be even higher. Finally, child restraint use among our infants and toddlers under 6 years of age remains among the lowest in the country (56 and 51 percent, respectively).

### Suicide

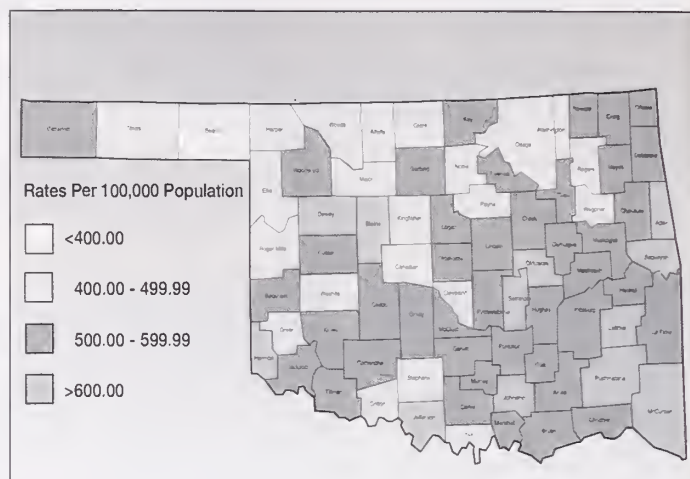
Approximately 70 children and young adults take their own life each year in Oklahoma. For every successful suicide, there are at least eight suicide attempts. Suicide is the second or third leading cause of all deaths among children and young adults 10-24 years of age; 73 percent are completed by firearms, followed by hanging (15 percent), drug overdose (7 percent), carbon monoxide (3 percent), and other methods (2 percent). According to the national YRBSS results, one-fourth of high school students had thought seriously about attempting suicide within the past year; 18 percent had made a specific plan to attempt suicide and 8 or 9 percent of students had attempted suicide during the past 12 months. Such acts typically involve overdoses of medications, notably analgesics and psychotropic agents. A history of a suicide attempt or threat is an important predictor of subsequent attempts. Other predictors are: depression, bipolar illness, abusive use of alcohol or drugs, physical or sexual abuse, hopelessness, impulsivity, and runaway behavior. Precipitating factors in many suicides include: disrupted relationships, interpersonal conflicts or crises, losses, and other stresses.

### Teen Pregnancy

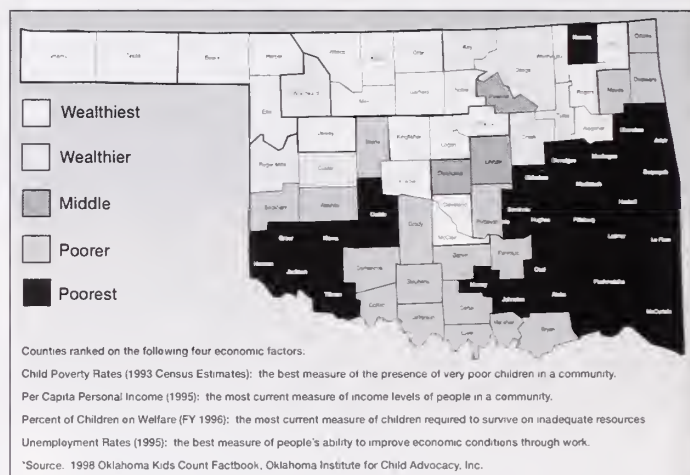
Between 1991 and 1996, the birth rate per 1000 15-19 year old females decreased over 12 percent in Oklahoma (72.1 vs. 63.4, respectively) as well as in the U.S. (62.1 vs. 54.4, respectively). Current trends in the U.S. suggest that young people are beginning to postpone the initiation of sexual activity, that fewer are engaging in sexual activity than in years past, and those actively engaged are using contraceptives in greater numbers.

In 1980, Oklahoma had the fourth highest birth rate in the nation for 15- to 19-year-old females. In 1995, we were tied with North Carolina in having the 14<sup>th</sup> highest birth rate for this same group. Nearly

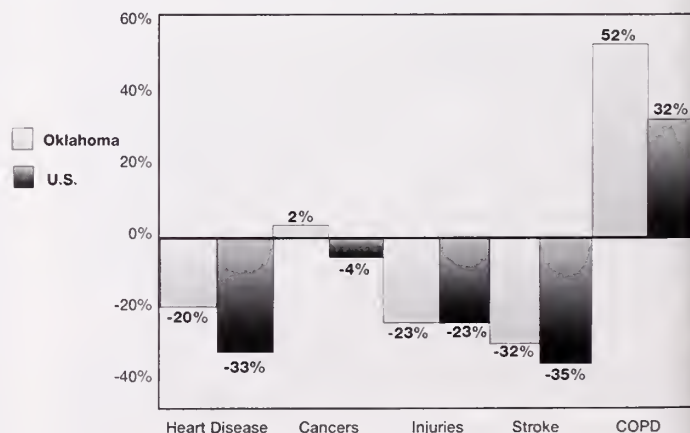
**Figure 3. Age-Adjusted Death Rates for Counties, Oklahoma 1994-1996**



**Figure 4. Oklahoma Economic Profile by County \***



**Figure 5. Percent Change in Age-Adjusted Rates of the Five Leading Causes of Death, Oklahoma \* and United States \*\*, 1980-1996**



\*Source: Oklahoma Vital Statistics

\*\*Source: Health: United States, 1998

two-thirds of teen births are to 18-19 year olds and many births in this population are repeat births to women who first became pregnant when they were in the 15- to 17-year-old age group. Over 74 percent of all births to teens are a result of an unintended pregnancy. Among 15-17 year olds, Oklahoma's birth rate declined less than the national rate (10.8 percent vs. 12.7 percent decrease).

The urgency for prevention is illustrated by the negative social and economic consequences associated with teen pregnancy. Teen mothers are three times more likely to live in poverty than mothers who delay childbearing until after age 20. Additionally, one-quarter of teen mothers have a second child within 24 months of the first birth. Thus, according to studies conducted by the Oklahoma State Department of Health Pregnancy Risk Assessment Monitoring System (PRAMS), mothers who have their first child at 17 or younger are at least ten times more likely to have not finished high school at a subsequent birth than women who wait until at least age 20 to have their first child.

These patterns of increase are very distressing and bode ill for the health of future generations.

## Conclusions

- 1) Though Oklahoma's health problems vary in nature and in severity from region to region, in general, the state of our state's health is in decline or has not improved comparably to national health trends.
- 2) Many, if not most, of the health problems discussed in this report are preventable.
- 3) The Board of Health and the Oklahoma State Department of Health cannot improve current health conditions alone.
- 4) Interventions will have to be initiated one step at a time, and most often by local communities, neighborhoods, and families.
- 5) The Board of Health calls on all Oklahomans to make a commitment to

## A Proposed Action Agenda

The Board of Health recommends the following action agenda to improve the state of health for Oklahomans, especially our youth:

- Implement a statewide, comprehensive, evidence-based tobacco prevention and reduction program that includes surveillance systems, community-based programs, media campaigns, school-based education, cessation products and services, and program evaluation.
- Reduce the percentage of our population in poverty and without health insurance, especially among our children and youth.
- Implement a statewide, comprehensive evidence-based cardiovascular prevention and control program.
- Increase public education of the efficacy of seat belts and child restraints and enhance law enforcement of existing seat belt/child restraint legislation.
- Develop community suicide prevention programs.
- Implement a comprehensive safety, physical education, and health behaviors curriculum in elementary and secondary schools statewide.
- Promote early and regular, risk-appropriate prenatal care, beginning in the 1<sup>st</sup> trimester.
- Promote the prevention of unintended pregnancies, especially unwanted pregnancies.
- Utilize community-based approaches to help create an environment that is conducive to positive decision making about sex and related health issues.

| County     | Average # Deaths per Year* | Age-Adjusted Death Rate** | YPLL 75 per 100,000 Population+ | YPLL 75 per Death++ | County       | Average # Deaths per Year* | Age-Adjusted Death Rate** | YPLL 75 per 100,000 Population+ | YPLL 75 per Death++ |
|------------|----------------------------|---------------------------|---------------------------------|---------------------|--------------|----------------------------|---------------------------|---------------------------------|---------------------|
| Adair      | 209                        | 623.7                     | 10,879.2                        | 10.3                | LeFlore      | 511                        | 580.2                     | 9,744.9                         | 8.7                 |
| Alfalfa    | 93                         | 482.7                     | 8,574.4                         | 5.7                 | Lincoln      | 310                        | 502.0                     | 8,469.2                         | 8.4                 |
| Atoka      | 148                        | 567.7                     | 9,574.9                         | 8.6                 | Logan        | 285                        | 501.3                     | 7,306.1                         | 7.9                 |
| Beaver     | 51                         | 342.2                     | 4,026.8                         | 4.7                 | Love         | 83                         | 449.9                     | 7,405.8                         | 7.5                 |
| Beckham    | 245                        | 554.1                     | 9,165.4                         | 7.0                 | Major        | 89                         | 432.3                     | 7,010.0                         | 6.1                 |
| Blaine     | 171                        | 615.5                     | 10,150.0                        | 6.5                 | Marshall     | 156                        | 505.7                     | 9,164.6                         | 6.9                 |
| Bryan      | 380                        | 501.9                     | 7,932.6                         | 7.0                 | Mayes        | 384                        | 536.0                     | 9,349.5                         | 8.7                 |
| Caddo      | 366                        | 579.1                     | 10,234.8                        | 8.5                 | McClain      | 220                        | 506.4                     | 7,589.0                         | 8.7                 |
| Canadian   | 523                        | 475.6                     | 5,828.4                         | 9.1                 | McCurtain    | 384                        | 619.4                     | 10,955.1                        | 9.8                 |
| Carter     | 529                        | 559.7                     | 9,683.2                         | 8.1                 | McIntosh     | 263                        | 576.9                     | 10,304.4                        | 7.2                 |
| Cherokee   | 355                        | 514.0                     | 8,290.5                         | 8.7                 | Murray       | 171                        | 557.7                     | 9,080.0                         | 6.5                 |
| Choctaw    | 183                        | 530.3                     | 9,500.3                         | 8.0                 | Muskogee     | 784                        | 553.5                     | 8,864.3                         | 7.8                 |
| Cimarron   | 37                         | 540.1                     | 9,158.6                         | 7.7                 | Noble        | 127                        | 495.0                     | 7,740.2                         | 6.8                 |
| Cleveland  | 1,009                      | 477.0                     | 5,740.5                         | 10.9                | Nowata       | 126                        | 532.5                     | 9,194.6                         | 7.2                 |
| Coal       | 76                         | 550.9                     | 9,808.2                         | 7.8                 | Oklfuskee    | 159                        | 625.8                     | 10,545.7                        | 7.5                 |
| Comanche   | 831                        | 574.7                     | 8,303.8                         | 11.2                | Oklahoma     | 5,862                      | 558.5                     | 9,093.6                         | 9.7                 |
| Cotton     | 87                         | 468.1                     | 7,923.6                         | 6.2                 | Okmulgee     | 470                        | 578.3                     | 9,832.9                         | 7.9                 |
| Craig      | 186                        | 572.6                     | 9,880.6                         | 7.6                 | Osage        | 347                        | 441.0                     | 6,926.4                         | 8.5                 |
| Creek      | 616                        | 537.4                     | 8,629.5                         | 9.1                 | Ottawa       | 413                        | 587.9                     | 9,622.3                         | 7.1                 |
| Custer     | 268                        | 544.1                     | 7,522.9                         | 7.4                 | Pawnee       | 181                        | 536.8                     | 9,069.9                         | 8.0                 |
| Delaware   | 424                        | 554.3                     | 9,654.4                         | 7.3                 | Payne        | 458                        | 430.9                     | 5,187.7                         | 7.2                 |
| Dewey      | 97                         | 608.6                     | 8,831.6                         | 4.7                 | Pittsburg    | 558                        | 563.7                     | 9,484.9                         | 7.3                 |
| Ellis      | 51                         | 446.5                     | 7,506.6                         | 6.2                 | Pontotoc     | 425                        | 557.1                     | 8,661.2                         | 7.0                 |
| Garfield   | 651                        | 527.1                     | 8,521.6                         | 7.5                 | Pottawatomie | 674                        | 569.8                     | 8,963.6                         | 8.1                 |
| Garvin     | 376                        | 576.5                     | 9,990.4                         | 7.1                 | Pushmataha   | 146                        | 602.1                     | 11,427.2                        | 8.9                 |
| Grady      | 433                        | 507.9                     | 7,894.1                         | 8.0                 | Roger Mills  | 43                         | 493.2                     | 8,775.2                         | 7.8                 |
| Grant      | 79                         | 473.0                     | 7,380.2                         | 5.1                 | Rogers       | 482                        | 494.0                     | 6,732.4                         | 8.7                 |
| Greer      | 104                        | 487.7                     | 6,873.3                         | 4.4                 | Seminole     | 347                        | 629.0                     | 10,656.1                        | 7.7                 |
| Harmon     | 63                         | 635.1                     | 10,338.8                        | 5.9                 | Sequoyah     | 394                        | 603.7                     | 9,672.5                         | 8.8                 |
| Harper     | 60                         | 489.9                     | 6,961.2                         | 4.5                 | Stephens     | 530                        | 494.8                     | 7,826.4                         | 6.4                 |
| Haskell    | 151                        | 592.8                     | 11,025.8                        | 8.1                 | Texas        | 132                        | 418.3                     | 6,202.8                         | 7.9                 |
| Hughes     | 202                        | 577.6                     | 9,628.2                         | 6.2                 | Tillman      | 139                        | 587.7                     | 9,199.8                         | 6.4                 |
| Jackson    | 260                        | 511.7                     | 7,344.6                         | 8.4                 | Tulsa        | 4,712                      | 539.0                     | 8,433.5                         | 9.4                 |
| Jefferson  | 109                        | 610.6                     | 10,738.0                        | 6.7                 | Wagoner      | 341                        | 452.0                     | 6,761.9                         | 10.4                |
| Johnston   | 131                        | 601.8                     | 10,706.1                        | 8.5                 | Washington   | 509                        | 462.9                     | 6,630.3                         | 6.2                 |
| Kay        | 554                        | 500.6                     | 8,203.4                         | 7.0                 | Washita      | 156                        | 481.8                     | 7,892.0                         | 5.9                 |
| Kingfisher | 141                        | 465.5                     | 7,470.5                         | 7.1                 | Woods        | 135                        | 487.6                     | 6,853.2                         | 4.3                 |
| Kiowa      | 167                        | 534.5                     | 7,877.7                         | 5.2                 | Woodward     | 193                        | 545.1                     | 7,964.3                         | 7.7                 |
| Latimer    | 139                        | 657.0                     | 11,351.5                        | 8.4                 | State        | 32,254                     | 533.5                     | 8,619.5                         | 8.5                 |

\*Total number of deaths from 1994-1996 divided by three.

\*\*The average number of deaths divided by the specific population (county or state) multiplied times 100,000 and then adjusted to the 1940 U.S. Standard million population.

+Average number of YPLL-75 divided by the specific population (county or state) multiplied times 100,000.

++The total years of potential life lost prior to age 75 divided by the total number of deaths (e.g., 10 is equivalent to an average age of death of 65 years; thus a higher number indicates a higher rate of persons dying prematurely).

# LETTERS TO THE EDITOR

## Thank You

To the Editor:

I compliment those involved with the *JOURNAL* of the OSMA for publishing the article by Dr. J. Michael Pontious on "A Return to Basics." Having been in the first group to take the Family Practice Boards and watching the changes of family practice over the years, I too feel his sense of confusion and frustration.

In my present quarter of a century role as a country doctor, it seems the greatest service I have to give to my patients is the ability to care for them, listen to them, and guide them while seeing them for their acute problem of sore throats, skin itches, or backaches.

I am afraid I have not the clientele nor the time to provide the good preventative medicine outlined now for all of our family practice trainees. I catch a blood pressure when I am checking a patient for their cold and I try to remind them to stop smoking when I see them for their bronchitis.

Through those encounters, I feel I am giving them a sense of my concern and my caring. This is a service that will never be compensated or understood but it is, to me, the basics of primary care and family practice.

Again, thank you for publishing Dr. Pontious's commentary. It lets me know in this small rural town in which I practice that I wasn't really the only one confused and that we certainly do have a function that is unique to our relation with our patients: We are the first line of caring.

Michael L. Jordan, MD  
Family Physician  
Pawhuska

## A Different Perspective

To the Editor:

After reading the Commentary by Dr. Pontious in the February 1999 *JOURNAL* regarding the status of family medicine, I decided to express a different view. From my perspective, the tone of self criticism and pessimism is not justified.

First, I must say that I do understand and share Dr. Pontious' concern as to the motives, methods and impact of third parties. All physicians have experienced those forces which place the bottom line above what is best for the patient. However, recognition of that reality should not result in the characterization of the generalist as a pawn. That assessment of the position and plight of the family physician does not do him or her justice.

What I have experienced and observed in Enid and surrounding towns in northwest Oklahoma is that primary care physicians are an essential, respected component of the medical community.

They continue to provide excellent medical care to large numbers of people and use their knowledge and judgment in making appropriate referrals.

There is no mindset that places the specialist above the generalist, but

rather there is a cooperative relationship in which doctors work side by side, caring for patients. There is neither a perception nor a reality that the specialist is superior and the generalist is inferior, or visa versa. They simply have different areas of expertise, and referrals go in both directions. It is that mutual respect that assures what we all seek: to provide care that places the best interest of our patients first.

If the characterization of the generalist as a "fall back" discipline is pervasive, it is not warranted. If the characterization of the specialist as impersonal or lacking empathy is pervasive, that is not warranted.

We should take pride in what doctors have done and are doing and look ahead with hope and determination toward what we must continue to do.

I am confident that through his emphasis on practicing "excellence in patient care" as

program director of OU/Enid Family Medicine, Dr. Pontious will continue to make very important contributions to medicine in Oklahoma.

It is only through recognition of and respect for our different roles and our like commitment that we will best serve our patients, ourselves and the future of medicine.

Jerry B. Blankenship, MD  
Urologist  
Enid

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## DEATHS

### Alfred A. Hellams, MD 1912 - 1998

Alfred A. Hellams, MD, died Oct. 4, 1998. He was born on Dec. 18, 1912, in Mobile, Alab., and completed his medical degree from the University of Oklahoma School of Medicine in 1938. Dr. Hellams was a member of the American Psychiatric Association, the Association of Military Surgeons, the American Medical Association, and a life member of the Oklahoma State Medical Association since 1980.

### Ramon G. Blanco, MD 1932 - 1999

Ramon G. Blanco, MD, died March 5, 1999. He was born Dec. 10, 1932, in Cuba and completed his medical degree at the University of Havana, Cuba, in 1962. Dr. Blanco was a member of the Oklahoma State Medical Association.

### Fay Knickerbocker, MD 1933 - 1999

Fay Knickerbocker, MD, died Feb. 6, 1999. She was born in 1933 and completed her medical degree from the Bowman Gray School of Medicine at Wake Forest University in Winston-Salem, N.C. Dr. Knickerbocker was a member of the Oklahoma County Medical Society and became a life member of the Oklahoma State Medical Association in 1998.

### Neal A. Pickett, Jr., MD 1944 - 1999

Neal A. Pickett, Jr., MD, died March 14, 1999. He was born April 17, 1944, in Inglewood, Calif., and completed his medical degree at the University of Oklahoma School of Medicine in 1970. Entering the United States Navy in 1973, Dr. Pickett served during Vietnam and attained a rank of Lieutenant before his discharge in 1975. He was presented the Outstanding Achievement Award by the Secretary of the Navy in 1974. Dr. Pickett was a member of the Oklahoma State Medical Association.

## IN MEMORIAM

### 1998

|                                   |              |
|-----------------------------------|--------------|
| Allen B. Eddington, MD .....      | May 20       |
| David C. Ramsey, MD .....         | May 22       |
| William H. Reiff, MD, FACS .....  | May 25       |
| Jerry L. Puls, MD .....           | June 5       |
| James M. Behrman, MD .....        | June 5       |
| Charles N. Talley, MD .....       | June 14      |
| Thomas C. Points, MD, PhD .....   | June 15      |
| Charles M. Cameron, Jr., MD ..... | June 22      |
| Philip G. Tullius, MD .....       | July 4       |
| Louis H. Charney, MD .....        | July 8       |
| Ralph L. Walker, DO .....         | July 11      |
| Brook S. Bowles, MD .....         | July 20      |
| Edwin R. Shapard, MD .....        | July 28      |
| Paul L. Masters, MD .....         | August 6     |
| Douglas D. Leatherman, MD .....   | August 21    |
| Richard E. Carpenter, MD .....    | August 30    |
| Henry J. Freede, MD .....         | September 9  |
| Chester K. Mengel, MD .....       | September 14 |
| Leaford Thornbrough, MD .....     | September 27 |
| Alfred A. Hellams, MD .....       | October 4    |
| Sumner Y. Andelman, MD .....      | October 6    |
| Eric B. Meador, MD .....          | October 10   |
| Vance A. Bradford, MD .....       | October 23   |
| Joseph S. Raff, MD .....          | November 12  |
| Herbert J. Forrest, MD .....      | November 14  |
| Joseph N. Mitchell, MD .....      | December 23  |

### 1999

|                                |            |
|--------------------------------|------------|
| Thomas Edward Rhea, MD .....   | January 2  |
| H. Ben Yagol, MD .....         | January 19 |
| Fay Knickerbocker, MD .....    | February 6 |
| Ramon G. Blanco, MD .....      | March 5    |
| Neal A. Pickett, Jr., MD ..... | March 14   |

## CLASSIFIEDS

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## Change and the OSMA Alliance

January 1, 2000, marks the beginning of the new millennium for all of us. The OSMA Alliance is no different. There has been so much emphasis on just how this transition will affect our computers that I began to question how it will impact our Alliance. Will we successfully negotiate new challenges or will we suffer the same fate that is predicted for many modern computers and be 'Y2K'D' in the transition? Has the Alliance made appropriate changes not only for the millennium but, more importantly, for the evolving world of medicine and the Alliance as proactive partners? I believe the answer to these questions can be found in the major changes we have accomplished during the last decade.

We began with a name change. In 1993, the AMA Auxiliary became the AMA Alliance. The OSMA Auxiliary followed suit and became an Alliance the next year. This change in name reflected a new approach to the changing membership needs, as well as changes in lifestyle and methods of health care delivery.

Then, in 1995, the AMA Alliance launched the National SAVE Program, or "Stop America's Violence Everywhere." The SAVE Program included efforts to address our nation's number one health crisis—violence. This national program gave the Alliance a united focus in this particular area of health promotion. The OSMA Alliance has embraced the SAVE Program on both the state and county levels. Activities such as the distribution of "Hands Are Not for Hitting," directed at child abuse prevention, and the conflict resolution coloring book "I Can Choose," to

hundreds of elementary children across the state are examples of how the OSMA state and county Alliances have worked to promote awareness. We as Alliance members across the nation have united in an effort to make a difference in our communities.

Again change was apparent when the American Medical Association Foundation made its debut at the AMA's Annual Meeting in June 1998. For almost 50 years, AMA Foundation has awarded over \$75 million to support the Medical Students Assistance Fund and the Medical School Excellence Fund. The funding has not changed.

What did change was the addition of a new service component to the equation. Physicians and medical students are now recognized for exceptional contributions to the health and well-being of their patients, their communities and our nation. Last year, the OSMA Alliance contributed over \$32,000 to this effort to promote a standard of excellence among our state's medical students and physicians.

Finally, what can be more indicative of change in today's medical world than the intrusion of the legislative process into medical care? Today health care is in the forefront of our nation's legislative arenas. We must take the responsibility to educate ourselves about the issues and express our concerns to our legislators. The OSMA Alliance, in an effort to facilitate active participation, has made use of modern technology. Through e-mail, we have rapid access to our legislators.

A new web page has enabled us to access information on legislative issues at all levels.

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**Cheryl Baker**  
*President, OSMA Alliance*

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*"Nothing is  
permanent but  
change."  
...Heraclitus*

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state, our dues pay for membership at the local, state and national levels. We are active participants in these national organizational changes. The OSMA Alliance does make an impact in the area of health promotion, through participation in the National SAVE Project. We do support our state's medical students and physicians through the AMA Foundation. And we have the responsibility to support legislative activities by becoming advocates for medicine.

In the words of Will Rogers, "Even if you're on the right track, you'll get run over if you just sit there." Our past has proved that we are most effective when we act together. Our future depends on continued involvement. Participate in the OSMA Alliance to make a social impact and to effect positive change. Join our organization as we move into the 'New Millennium.'

# THE LAST WORD

## **OSMA Award Recipients Selected by Board of Trustees**

John R. Bozalis, MD, of Oklahoma City, was selected by the OSMA Board of Trustees to receive the 1999 OSMA Award for Community Service. The award is given in recognition of achievement in the practice of medicine for service above and beyond the call of duty. Dr. Bozalis is Project Director of the Schools for Healthy Lifestyles program in the Oklahoma City School District.

Bobby Mureer, former New York Yankee and resident of Oklahoma County, was selected as the 1999 Don J. Blair Friend of Medicine. Mureer uses his status as a sports figure to gain the attention of young people in order to educate them about the dangers of tobacco use.

The awards were presented at the Opening Session of the OSMA House of Delegates on Friday, April 16, 1999.

## **Alliance Members to Hold National Offices**

Susan Paddack, spouse of Gary Paddack, MD, of Ada, was recently nominated to serve as president-elect of the AMA Alliance and will be installed on June 22nd at the AMAA Annual Meeting in Chicago. Barbara Jett, spouse of Mason Jett, MD, of Oklahoma City, has been appointed to serve as chair of the AMA Foundation Committee for 1999-2000.

## **Legislative News**

The Coalition for Quality Patient Care was successful in deleting Section 17B from SB 751. The provision limits defense attorneys in medical malpractice cases to obtain only "relevant" medical records of the plaintiff or talking with subsequent treating physicians other than through formal deposition-taking procedures.

HB 1443-Oklahoma Health Care Quality Improvement Act (Peer Review), and HB 1381-Do-Not-Resuscitate, passed the Senate, and SB 2-Mental Health Parity, passed the House. These bills will go to Joint Conference Committees. HB 1368-Genetic Research Study Non-Disclosure Act, passed the Senate and will go to the Governor for action. Bills signed by the Governor include HB 1486-SoonerCare Task Force, and HB 1189-amendments to the Medical Practice Act, providing for a medical doctor to voluntarily surrender a license to practice in lieu of prosecution by the Board after certain conditions are met.

## **State Health Department Presents FY2000 Budget**

Officials from the State Health Department presented the fiscal year (FY) 2000 budget request to the Senate Appropriations Subcommittee on Health and Social Services on Wednesday, April 7, requesting \$125.9 million for FY 2000, an 88.3-percent increase over the FY 1999 allocation.

## **Institute on Health Care for the Elderly to be held in June**

The 10th Annual Summer Geriatric Institute, sponsored by the Oklahoma Geriatric Education Center at the OU Health Sciences Center, will be June 23 and 24 at the University of Oklahoma Norman campus. Enrollment is open to health care professionals, faculty, and students. The institute emphasizes practical information to be used to enhance the overall health of older individuals, with special interest sessions for gerontological nurses and behavioral health workers. For more information, call 405/271-8558.

## **Medical Alumni Association Accepting Nominations**

The University of Oklahoma Medical Alumni Association is accepting nominations for honorees for the year 2000. Being sought are nominees for distinguished medical service, distinguished community service, and distinguished Oklahoma institution. Letters of nomination and biographical sketches must be received by mail or fax by June 1, 1999, at the University of Oklahoma Medical Alumni Association, 1000 Stanton L. Young Boulevard, Library 175, Oklahoma City, OK 73190, fax 405/271-2301.

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# JOURNAL

## Call for Papers

The *Journal* invites the submission of piquant, constructive commentary, interesting case reports and review articles. The *Journal* supports the mission of the Oklahoma State Medical Association-- "to promote the best health for the people of Oklahoma in a professional manner by advocating for patients, representing physicians and promoting the art and science of medicine." The *Journal* promotes and improves health education by reviewing, publishing and distributing original scientific articles provided by physicians and researchers who share their knowledge and perspectives on issues of concern to the physicians and medical students in Oklahoma. (See Instructions for Authors on page 242.)

## Call for Photos

For those who enjoy photography, the *Journal* encourages the submission color photographs of Oklahoma scenes or native wildlife for consideration as cover photos.

## Call for News

In addition, the *Journal* welcomes general news items featuring medical trends which have an effect on the practice of medicine in Oklahoma. Announcements of an Oklahoma physician's role in a national organization or project are also invited.

## Submit Materials

Your submission of these types of materials will be much appreciated. The *Journal* team will be eager to be helpful in the processing of submissions. Address your envelope to:

**Journal, Oklahoma State Medical Association  
601 W. I-44 Service Road  
Oklahoma City, Okla. 73118**

## The Rewards

The *Journal* offers a means for scientific information to be distributed to physicians in Oklahoma. The reward to the author may be not only in the form of public recognition if published, but the work may draw an award from the Oklahoma State Medical Association, with an announcement at the Annual Meeting.

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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION  
JUNE 1999



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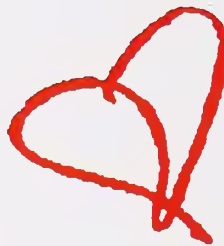
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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

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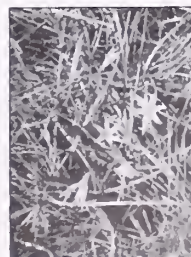
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This photo of a dog tooth lily was taken by  
Robert M. Smith, MD, of Oklahoma City.

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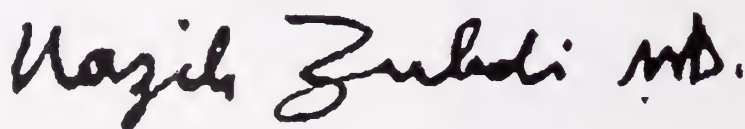
April 16, 1999

In 1957 I was first privileged to walk onto the open plains and into the open hearts of the good people of Oklahoma. Those forty-two years have seen many changes and much growth, especially in the medical care available to Oklahomans.

The latest of my endeavors is the Oklahoma Transplantation Institute, a concept and a dream I envisioned, founding it and naming it in 1984. Fifteen years later it has grown to become the only comprehensive center in Oklahoma, performing all types of solid organ transplantation. OTI is truly a world-class center, giving new life and new hope to people of this great state as well as around the globe.

Now, here in 1999 as I approach my 75<sup>th</sup> birthday, the time has come to pass on the torch to a new generation of healers: Stanley Hupfeld, President and CEO of INTEGRIS Health who has been with me for over 12 years, and as my replacement, Dr. Bakr Nour, presently the director of the Abdominal Transplant Section. I have every confidence in the skill, compassion, and judgment of both leaders. Both are proven quanta. I am sure that the institute will continue to grow and flourish under their new directorship.

The excellence of care for which the center has been noted will be our gift to the people of Oklahoma well into the new millennium, along with my personal gratitude to all who have shared this memorable journey with me.

A handwritten signature in black ink that reads "Nazih Zuhdi MD." The signature is written in a cursive, flowing style.

Dr. Nazih Zuhdi  
Founder & Director Emeritus  
Oklahoma Transplantation Institute

# EDITORIAL

You will have to bear with me. This is my first editorial. Sure I have read them over the years, but I have failed to imagine that one day it would be my responsibility to compose one.

Suddenly this is a bit more anxiety-provoking than I visualized.

As the new editor-in-chief of the *Journal* of the Oklahoma State Medical Association, I follow in the tradition of some excellent physician-writers. During my years of reading the *Journal*, I have been exposed to the thoughtful styles of Mark Johnson, MD, and most recently Ray McIntyre, MD. These are men that have guided the *Journal* through tumultuous times; they have kept an "even hand" on the style and content. They have negotiated the political waters with honesty and vision. They have treated authors and researchers with respect and innovation. They have served the organization and its *Journal* well.

To them we owe a debt of gratitude and thanks.

And now the weight of that tradition has been placed in front of me. I am honored to be considered in the same tradition as my predecessors. I will attempt to "live up" to the tradition and yet create a bit of my own.

There in lies the rub.

Being an editor is one of those tasks that must have its background and boundaries. After all "an editorial is a column of personal opinion that may or may not reflect the official position of the OSMA." It is best that you know something about me and what has molded me to this point.

My appointment as editor-in-chief will be a surprise to many. I am taking great pride in remembering a sophomore English teacher who did not understand my analysis of Aldous Huxley's *Brave New World* and subsequently gave me a marginal grade, stating "much of this is unclear and vague." I don't believe that she would be among the folks who would have thought it possible that the *Journal* of the Oklahoma State Medical Association would allow me to participate at this level.

But alas, life plays little tricks on unimaginative English teachers.

My writing style and content have always afforded me a bit of trouble. I don't intend for it to be offensive or confrontational. I do intend that it be seen as thought-provoking and challenging. This is one of the reasons that I accepted this task.

Where else can you catch the eye and mind of so many clinical colleagues?

I am an Oklahoman by birth. I am the child of a seamstress and a milkman. I have been blessed by having some wonderful teachers, encouragers and mentors in my medical "pilgrimage."

Born in Ada, raised in Ponca City and Enid, I am a product of this state's educational system. I graduated from Enid High School and did my undergraduate work at Oklahoma Baptist University in Shawnee. My medical education was achieved at the University of Oklahoma College of Medicine and I completed a Family Practice Residency in Shawnee, Oklahoma.

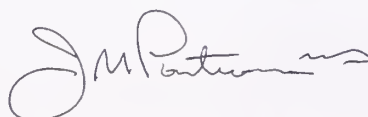
I am married to a family physician, Myrna Kirk Pontious. We have three wonderful children, Jessica, Ben and Jon. I practice in Enid and serve as the program director for the OU/Garfield County Medical Society Family Practice Residency Program.

I am labeled as one who tends to "think outside of traditional boxes." My professional interests include HIV Care in Rural Communities, Rural Obstetrical Care Delivery Systems, Depression in Primary Care and Practice Based Research Networks.

I tell you all of these things because I want you to understand why I write down the things that I will write down.

I look forward to my tenure as editor-in-chief of the *Journal* of Oklahoma State Medical Association. I commit to you an honest and thoughtful style. Do not expect me to always take the "party line." Do expect me to ask the critical questions.

Thanks for the opportunity to serve in this position. My door is open to your comments, suggestions and concerns.



J. Michael Pontious, MD  
Editor-in-Chief

**"It is the mark of an educated mind to be able to entertain a thought without accepting it."**  
-Aristotle



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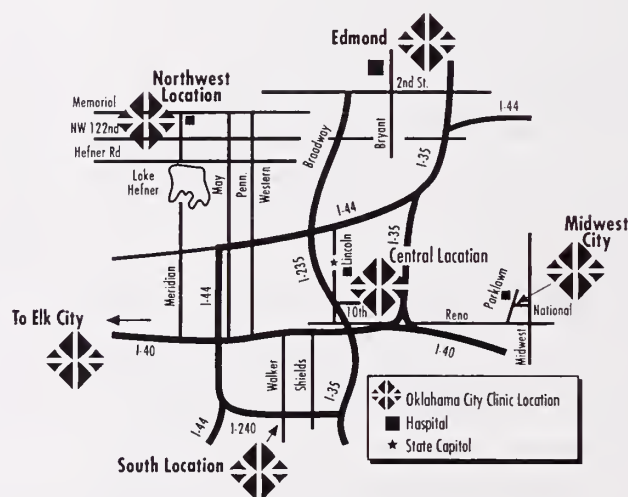
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# PRESIDENT'S PAGE

## Positive Opportunities

The annual meeting of the OSMA was held at the Tulsa Southern Hills Marriot, April 15-18. It was a good meeting.

Everything was positive. It was another outstanding example of our Democratic process.



I want to thank all of you who participated as delegates and helped us review resolutions, listened to our accomplishments (and failures) of the past year and plans for the future, and elected those who will help run the association in the coming year. I appreciate all those who attended the inaugural dinner at the Gilcrease Museum Saturday. It was a fun night!

Much was accomplished. Many resolutions were approved and those recommended actions will be carried out over the next few months (details of the actions will appear in the July issue of the *Journal*). We met with the Alliance as they prepared to carry out their 1999-2000 theme, "Excellence Within the Heart of Our Community."

We invited state legislators to several events to show our appreciation for their help over the past year. We heard a report from the AMA Secretary/Treasurer and from our AMA delegation. There were opportunities to hear annual reports from OMPAC, our Federal Government Activities Council, and our PLICO malpractice and health insurance company, and to discuss problems and make suggestions in these areas.

The meeting provided an opportunity for the rural physicians, the members or the organized medical staff section, the medical students, and members of several specialty societies to get together to discuss their specific problems and how they relate to OSMA and the AMA.

It has been suggested by several physicians throughout the state that we need to streamline the annual meeting. It has been recommended that we cut the meeting time (maybe two days instead of three), to attend to the business and cut some of the "extra" stuff. Your officers and trustees will be considering this over the next few months to see if we can meet these requests and still retain the important "stuff" that I feel is necessary to maintain the quality and success of our annual meetings.

Again, thank you for your participation, and please continue to discuss and make suggestions regarding the activities of our association.

Sincerely,

A handwritten signature in dark ink that reads "Boyd O. Whitlock MD." The signature is written in a cursive, flowing style.

Boyd O. Whitlock, MD  
OSMA President

---

"The annual meeting...was another outstanding example of our Democratic process."

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## Colorectal Cancer: Genetics and Screening

Russell G. Postier, MD; Edward N. Brandt, Jr., MD, PhD

Colorectal cancer is a common disease in the Western world. Most, if not all, colorectal cancers develop from previously benign adenomas. There are a number of genetic abnormalities including mutations in oncogenes and tumor suppressor genes which either present as a germline, or acquired defects lead to the development of colorectal cancer. Two well-defined hereditary colorectal cancer syndromes exist, hereditary nonpolyposis colorectal cancer syndrome and familial adenomatous polyposis coli, for which genetic testing is possible and advised. Guidelines for screening for colorectal cancer in average, moderate, and high risk patients are available from the American Cancer Society and were updated in 1997. The American Society of Clinical Oncology has published guidelines for genetic testing in a variety of cancers including colorectal cancer.

### Introduction

Colorectal cancer is the second most common cancer in the Western world. The incidence, prevalence, and deaths from the disease continue to increase and this trend is projected to continue well into the new millennium.<sup>1</sup>

Current surgical or endoscopic techniques allow for the cure or prevention of this disease when premalignant polyps or early cancers are detected. We must obtain a better understanding of the biological nature of colorectal cancer and its precursors to determine which patients should be investigated for the presence of these lesions. The genetics of colorectal cancer have been under intense investigation and more information is now available. In addition, genetic testing is now available for two syndromes with a high risk for the development of colorectal cancer.<sup>2-4</sup>

Coupling this genetic information with good family histories has enabled physicians to make recommendations for screening based upon accurate assessments of risk. The purpose of this article is to review pertinent colorectal cancer genetics as it applies to the clinical setting and to make recommendations for appropriate screening evaluations and the use of gene testing.

### Case Report

A 45-year-old woman presents with rectal bleeding. Flexible sigmoidoscopy shows a polyp in the rectosigmoid colon. Family history reveals that her mother died of colorectal cancer. Colonoscopy was performed and reveals four other adenomatous polyps involving the ascending colon. Further family history reveals that her mother developed colon cancer at 67 years of age, a maternal aunt had endometrial cancer at 45 years of age, and her maternal grandfather developed rectal cancer at 54 years of age.

Does this family fit the criteria for a syndrome of inherited colorectal cancer? Does this patient require further screening examinations? What treatment should this patient undergo? Does she need genetic testing?

Screening for endometrial and ovarian carcinoma was done and was negative. The patient underwent an abdominal colectomy and ileorectal anastomosis. Genetic analysis revealed a mutation of *hMSH2*, a mismatch repair gene associated with hereditary nonpolyposis colorectal cancer. Annual rigid proctoscopy is scheduled. Family members over 21 years of age are scheduled for colonoscopy and women are advised to have screening for endometrial and ovarian carcinoma. This case serves to illustrate how the proper evaluation of a relatively common problem, rectal bleeding, can lead to a significant change in therapy not only for the patient, but for her family.

Direct correspondence to: Russell G. Postier, MD, P.O. Box 26901 WP 2140, Oklahoma City, Okla. 73190.

### The Polyp-to-Cancer Sequence

It is now clear that nearly all colorectal adenocarcinomas develop from previously benign polyps. These polyps develop as a result of mutations, which are either inherited, acquired, or both. However, not all polyps will eventually become malignant. In those that do progress, the time from the progression of a benign polyp to an adenocarcinoma is variable but probably greater than four years in most cases. While these mutations generally occur according to a preferred sequence, the total accumulation of changes, rather than their order with respect to one another, is responsible for determining whether the polyp progresses to a malignant tumor.<sup>6</sup>

Adenomatous polyps can be removed with currently available endoscopic techniques and allow for the prevention of colorectal carcinoma. Unfortunately, these polyps are usually asymptomatic and are not common enough to justify wholesale screening by either colonoscopy or barium enema examination.

### Oncogenes and Tumor Suppressor Genes

A number of oncogenes and tumor suppresser genes have been described in colorectal adenocarcinomas. The most important of these appear to be *p53*, *DCC* (deleted in colorectal cancer), *APC* (adenomatous polyposis coli), and the mismatch repair genes.

The most common cancer related genetic change known is a mutation of the *p53* gene located on chromosome 17p.<sup>7</sup> The normal allele of this autosomal gene encodes a 53-kD nuclear phosphoprotein involved in the control of cell proliferation. The *p53* gene has been termed the genomic "guardian angel" because of its role in the control of cell proliferation in the face of genetic damage. It can act to temporarily halt the cycle of cell division in response to DNA damage to allow time for DNA to be repaired before being copied. *p53* does this by stimulating the *Waf1* gene to produce its protein p21 that inhibits cyclin-dependent kinases which are key enzymes needed for cell cycle progression.<sup>8</sup>

In some cases, *p53* may actually cause damaged cells to self-destruct in the process called apoptosis to prevent the transmission of damaged DNA to offspring cells.<sup>9-11</sup> Mutations of the *p53* gene occur as germ cell changes in the inherited Li-Fraumeni cancer syndrome, in 1 percent of children with sarcoma, in 6 percent of children with second malignant neoplasms, and infrequently in women with breast cancer.<sup>12-15</sup>

However, the vast majority of the *p53* abnormalities associated with human tumors and nearly all those seen in colorectal cancers are acquired changes and thus not amenable to genetic testing.

The *DCC*, or deleted in colorectal cancer gene, is a tumor suppresser gene located on chromosome 18q. This gene is lost in 70 percent of colorectal adenocarcinomas and in almost 50 percent of late adenomas.<sup>16-18</sup> This gene encodes a protein related to the adhesion molecule family.<sup>19</sup> It is expressed in normal colonic mucosa but is reduced or absent in most colorectal carcinomas. Thus, this gene might play a role in the development of colorectal tumors, perhaps through alterations in normal cell-cell and cell-extracellular matrix interactions. This is an acquired defect and not amenable to genetic testing.

The *APC*, or adenomatous polyposis coli gene, is located on chromosome 5q. The *APC* gene codes for a 2843-amino acid protein that is important in cell adhesion and signal transduction.<sup>20-23</sup> This gene is responsible for the autosomal dominant disease familial adenomatous polyposis and its variants. This is a germline mutation and thus amenable to genetic testing.

The mismatch repair genes include four known genes whose job is to act as the "genetic housekeeper." These genes are *hMSH2* on chromosome 2q, *hMLH1* on chromosome 3q, *hPMS1* on chromosome 2p, and *hPMS2* on chromosome 7. The *hMSH2* and *hMLH1* genes account for 90 percent of the mutations in hereditary nonpolyposis colorectal cancer syndrome (HNPCC). The building blocks of DNA, nucleotides, are normally paired in a specific pattern between the two complementary DNA strands. Mismatched nucleotides signal a genetic error. The mismatch repair genes, like genetic proofreaders, seem to be able to spot mismatches and orchestrate the enzymes that effect repairs. If these housekeepers don't function, errors accumulate in the course of many generations of cell division and mutations occur which lead to cancer.

Genetic testing for mismatch repair gene abnormalities is done either by direct gene sequencing or in-vitro synthesized protein assay for *hMSH2* and *hMLH1* or by a technique known as replication error repair testing (RER), which detects a characteristic genetic defect known as microsatellite instability (min), which results when mismatch repair is faulty. RER testing will detect mutations in mismatch repair genes other than *hMSH2* and *hMLH1*, but is less

specific for the HNPCC syndrome, as 12 to 15 percent of patients with sporadic colorectal cancer will have microsatellite instability.<sup>24-26</sup>

## Hereditary Colorectal Cancer Syndromes

### Familial Colorectal Cancer

Ten to 15 percent of patients with colorectal cancer have other affected family members but their pedigrees do not fit the criteria for either familial adenomatous polyposis or hereditary nonpolyposis colorectal cancer.<sup>27</sup> There is evidence from cohort and case-control studies that people who have close relatives with colorectal cancer have an increased risk of colorectal cancer and develop the disease at a younger age than people without a family history of colorectal cancer.

In people with a single first degree relative, the incidence of colorectal cancer at age 40 years is comparable to that in people without a family history of colorectal cancer at age 50 years. Within each age group, the risk is greatest in those whose relatives developed cancer at a younger age.<sup>27</sup> It is likely that a number of these patients will be eventually identified as having a specific syndrome associated with an oncogene or family of oncogenes, but this is not now known. For this reason, genetic testing is not currently feasible for this group of patients. Because of the increased risk of colorectal cancer in the relatives of these patients, screening recommendations are different for them than for the normal population.

### Hereditary Nonpolyposis Colorectal Cancer (HNPCC)

Hereditary nonpolyposis colorectal cancer (HNPCC) was first described by Henry Lynch in 1966 and is often called the Lynch syndrome.<sup>28</sup> The clinical syndrome has two main forms: one without a family history of other cancers and the other with an increased familial occurrence of other types of cancers, typically of the ovary and uterus. In both variations, colorectal cancers occur at an early age, in the fourth and fifth decades, and the cancers are predominantly proximal to the splenic flexure. Adenomatous polyps occur as precursors of these cancers but in much smaller numbers than seen in familial adenomatous polyposis. There seems to be a more rapid transformation of adenomas to cancer in HNPCC than that seen in the general population. Despite this, colorectal cancers in HNPCC have a better prognosis. Mismatch repair gene mutations are responsible

**Table 1. Bethesda Guidelines for Genetic Testing for HNPCC**

1. Individuals with cancer in families that meet the Amsterdam Criteria.
2. Individuals with two HNPCC-related cancers, including synchronous and metachronous colorectal cancers or associated extracolonic cancers<sup>1</sup>
3. Individuals with colorectal cancer and a first-degree relative with colorectal cancer and/or HNPCC-related extracolonic cancer and/or a colorectal adenoma; one of the cancers diagnosed at age <45 years, and the adenoma diagnosed at age <40 years.
4. Individuals with colorectal cancer or endometrial cancer diagnosed at age <45 years.
5. Individuals with right-sided colorectal cancer with an undifferentiated pattern (solid/cribriform) on histopathology diagnosed at age <45 years.<sup>2</sup>
6. Individuals with signet-ring-cell-type colorectal cancer diagnosed at age <45 years.<sup>3</sup>
7. Individuals with adenomas diagnosed at age <40 years.

1. Endometrial, ovarian, gastric, hepatobiliary, or small-bowel cancer or transitional cell carcinoma of the renal pelvis or ureter.

2. Solid/cribriform form defined as poorly differentiated or undifferentiated carcinoma composed of irregular, solid sheets of large eosinophilic cells and containing small gland-like spaces.

3. Composed of >50 percent signet ring cells.

Reprinted with permission.

for this syndrome with 90 percent of cases due to abnormalities in *hMSH2* and *hMLH1*.

Two sets of criteria have been developed for use in determining which patients with colorectal cancer should undergo testing for HNPCC. The Amsterdam criteria were developed in 1991 to have minimal guidelines for HNPCC for recruitment of patients into collaborative research trials. The three criteria are: 1) at least three relatives with colorectal cancer, one of them a first degree relative of the other two, 2) at least two successive generations affected, and 3) diagnosis of colorectal cancer before age 30 in one of the individuals.<sup>29</sup>

Because of the strict nature of the Amsterdam criteria, not all patients with HNPCC meet these guidelines. In response to this, the National Institutes of Health hosted a meeting in Bethesda, Maryland, in November 1996, and developed the Bethesda Guidelines for recommending testing of patients for HNPCC.<sup>30</sup> These guidelines are summarized in Table 1. Using the more liberal Bethesda guidelines, as many as 15 to 20 percent of patients with colorectal cancer in the United States would be candidates for genetic testing. Individuals meeting the Bethesda criteria would initially have their tumors tested for microsatel-

Table 2. ASC Guidelines for Screening and Surveillance for Early Detection of Colorectal Polyps and Cancer

| Risk Category   | Recommendation <sup>†</sup>   | Age to Begin   | Interval  |
|---|---|--|---|
| AVERAGE RISK  |   |  |   |
| All people 50 years or older who are not in the categories below  | One of the following<br>FOBT plus flexible sigmoidoscopy <sup>‡</sup><br>or TCE <sup>§</sup>                  | Age 50<br>Age 50   | FOBT every year and flexible sigmoidoscopy every 5-10 y<br>Colonoscopy every 10 y or DCBE every 5-10 y                    |
| MODERATE RISK   |   |  |   |
| People with single, small (<1cm) adenomatous polyps   | Colonoscopy   | At time of initial polyp diagnosis   | TCE within 3 y after initial polyp removal; if normal, as per average risk recommendations (above)                        |
| People with large (≥1 cm) or multiple adenomatous polyps of any size  | Colonoscopy   | At time of initial polyp diagnosis   | TCE within 3 y after initial polyp removal; if normal, TCE every 5 y  |
| Personal history of curative-intent resection of colorectal cancer  | TCE <sup>§</sup>  | Within 1 y after resection   | If normal, TCE in 3 y; if still normal, TCE every 5 y   |
| Colorectal cancer or adenomatous polyps in first-degree relative younger than 60 y or in two or more first-degree relatives of any ages | TCE   | Age 40 or 10 y before the youngest case in the family, whichever is earlier      | Every 5 y   |
| Colorectal cancer in other relatives (not included above)   | As per average risk recommendations (above); may consider beginning screening before age 50                   |  |   |
| HIGH RISK   |   |  |   |
| Family history of familial adenomatous polyposis  | Early surveillance with endoscopy, counseling to consider genetic testing, and referral to a specialty center | Puberty  | If genetic test positive or polyposis confirmed, consider colectomy; otherwise, endoscopy every 1-2 y                     |
| Family history of hereditary non-polyposis colon cancer   | Colonoscopy and counseling to consider genetic testing  | Age 21   | If genetic test positive or if patient has not had genetic testing, colonoscopy every 2 y until age 40 y, then every year |
| Inflammatory bowel disease  | Colonoscopies with biopsies for dysplasia   | 8 y after the start of pancolitis; 12-15 y after the start of left-sided colitis | Every 1-2 y   |

\* Approximately 70-80% of cases are from average-risk individuals, approximately 15-20% are from moderate-risk individuals, and 5-10% are from high-risk individuals.

† Digital rectal examination should be done at the time of each sigmoidoscopy, colonoscopy, or DCBE.

‡ Annual FOBT has been shown to reduce mortality from colorectal cancer, so it is preferable to no screening; however, the ACS recommends that annual FOBT be accompanied by flexible sigmoidoscopy to further reduce the risk of colorectal cancer mortality.

§ TCE includes either colonoscopy or DCBE. The choice of procedure should depend on the medical status of the patient and the relative quality of the medical examinations available in a specific community. Flexible sigmoidoscopy should be performed in those instances in which the rectosigmoid colon is not well visualized by DCBE. DCBE would be performed when the entire colon has not been adequately evaluated by colonoscopy.

§ Assumes that a perioperative TCE was done.

DCBE = double contrast barium enema; FOBT = fecal occult blood testing; TCE = total colon examination; y = years.

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lite instability and if present, then undergo germline testing for mismatch repair gene mutations.

#### Familial Adenomatous Polyposis (FAP)

Familial adenomatous polyposis is due to an inherited or acquired germline mutation in the *APC* gene and has four variants: typical FAP, Gardner's syndrome, Turcot's syndrome, and attenuated polyposis coli.<sup>20,21,31</sup>

Familial adenomatous polyposis coli accounts for nearly 1 percent of all colorectal cancers. It is an autosomal dominant disease with a near 100-percent penetrance. Approximately 20 percent of FAP patients have no family history for the disease and are thought to bear new spontaneous germline mutations of the *APC* gene.<sup>32</sup> The criteria for diagnosis is a finding of more than 100 colorectal adenomas. Patients with fewer than 100 adenomas are said to have attenuated adenomatous polyposis coli.

Polyps appear at a mean age of 16 years. In undiagnosed patients, symptoms usually occur at 33 years and colorectal cancer develops at a

mean of 36 years. Untreated patients usually are dead by age 42 years. Extra colonic manifestations also occur in the Gardner's and Turcot's phenotypes. In 1993, Powell et al developed the in-vitro synthesized protein assay for detection of mutations in the *APC* gene. This test will detect 80 percent of the affected patients. If a pro band is tested and is positive, then the family members can be tested with a reliability approaching 100 percent.<sup>33-35</sup>

#### Screening for Colorectal Cancer

Since 1980, the American Cancer Society has issued recommendations for screening for colorectal cancer. The most current guidelines were updated in 1997. These guidelines were developed by the ACS detection and treatment advisory group on colorectal cancer.<sup>36</sup> A summary of the ACS recommendations can be found in Table 2. In average risk patients, screening should begin by age 50 years and include fecal occult blood testing and either flexible sigmoidoscopy or total colon examination (either barium enema or colonoscopy). Unless adenomatous polyps are

detected, these examinations are repeated every five years. As the patient's risk increases, both the frequency of testing and invasiveness of testing increases. While these guidelines are based on a consensus rather than prospective clinical trials, they are a very reasonable approach to screening for this disease.

### Guidelines for Genetic Testing

In 1996, the American Society of Clinical Oncology assembled a committee to review the scientific evidence regarding genetic testing and to develop a set of recommendations. These were published in May of 1996 and are provided in Table 3.<sup>37</sup> They divided their recommendations into three groups based on the relative benefit and evidence supporting the validity of genetic testing for each category of patients. They further state, "Oncologists should consider offering genetic testing only for the first two categories described in the table. This should be done only if clinicians are able to provide or make available adequate genetic education and counseling as well access to preventive and surveillance options."<sup>37</sup> Under these guidelines, both HNPCC and FAP families would be offered genetic testing.

It is becoming more important than ever for physicians to obtain a careful family history of cancer in their patients, to facilitate counseling regarding familial cancer risk and options for prevention and early detection, and to recognize those families for which genetic testing may serve as an aid in counseling. It is also important to assure that informed consent has been given by the patient as an integral part of the genetic predisposition testing process. It cannot be overemphasized that genetic testing alone is not beneficial and can be harmful if not coupled with a thorough understanding of both the benefits and limitations of the test being considered as well as extensive genetic counseling with the patients involved.

Risk assessment, genetic consultation, and possible gene testing for colorectal cancer can be obtained at some academic medical centers and cancer centers, including the University of Oklahoma Health Sciences Center-Oklahoma City.

### Summary

Colorectal cancer is a common disease and continues to increase in incidence and prevalence. Surgical cure can be achieved in a high percentage of patients if the disease is detected early. The lack of early symptoms makes identification and screening of asymptomatic patients

**Table 3. American Society of Clinical Oncology Guidelines: Three Categories for Consideration for Cancer Predisposition Testing**

| <b>Group 1</b>  |  |
|---|--|
| <i>Tests for families with well-defined hereditary syndromes for which either a positive or negative result will change medical care, and for which genetic testing may be considered part of the standard management of affected families.</i>   |  |
| <b>Syndrome</b>   | <b>Gene Tested</b>                                 |
| Familial adenomatous polyposis  | APC <sup>1</sup>                                   |
| Multiple endocrine neoplasia 2a,2b  | RET <sup>1</sup>                                   |
| Retinoblastoma  | RB1  |
| Van Hippel-Lindau syndrome  | VHL  |
| <b>Group 2</b>  |  |
| <i>Tests for hereditary syndromes with a high probability of linkage to known cancer susceptibility genes, and for which the medical benefit of the identification of a heterozygote (carrier) is presumed but not established. The potential clinical value and reliability of the test is based on research studies.</i>  |  |
| <b>Syndrome</b>   | <b>Gene Tested</b>                                 |
| Hereditary non-polyposis colon cancer   | MSH2 <sup>1</sup> , MLH1 <sup>1</sup> , PMS1, PMS2 |
| Hereditary breast ovarian syndrome  | BRCA1 <sup>1</sup> , BRCA2 <sup>2</sup>            |
| Li-Fraumeni syndrome  | p53 <sup>1</sup>                                   |
| <b>Group 3</b>  |  |
| <i>Tests for individuals without a family history of cancer, in which the significance of the detection of a germline mutation is not clear; or tests for hereditary syndromes for which germline mutations have been identified only in a small number of families, or for which the medical benefits of the identification of a heterozygote (carrier) is not established.</i>  |  |
| <b>Syndrome</b>   | <b>Gene Tested</b>                                 |
| Melanoma, and melanoma associated syndromes   | p16 <sup>1</sup> , CDK4                            |
| Ataxia Telangiectasia associated susceptibilities   | ATM  |
| <sup>1</sup> Mutation detection is commercially available, utilizing various methodologies for which sensitivity and specificity may not be known. Commercial availability of a genetic test does not ensure that the test is indicated for routine clinical application.<br><sup>2</sup> Risk based on identification of BRCA2 mutations is currently offered only as part of research studies. Pending identification of the spectrum of mutations, the presumed benefits of BRCA2-based counseling are not fully defined. Reprinted with permission. |  |

important in reducing the impact of these diseases. Research in genetics and clinical epidemiology has greatly increased our understanding of the biological basis for colorectal cancer and has begun to provide us with the tools to recognize which patients are at increased risk and provide appropriate counseling, screening, and in some cases genetic testing. These recommendations are available as colorectal cancer screening guidelines of the American Cancer Society and as guidelines for genetic testing from the American Society of Clinical Oncology. As further knowledge is acquired, we will hopefully develop more sensitive, less invasive, and less expensive screening tests that will be applicable to an even broader patient base.

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## Coronary Artery Disease in Women: A Silent Killer

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Coronary Artery Disease (CAD) is the leading cause of death and disability among postmenopausal women. Contrary to popular belief, women are at a much greater risk for CAD than for breast cancer. For instance, a 50-year-old female faces a 46 percent risk of CAD and 31 percent risk of CAD mortality. In contrast, her probability of developing and dying from breast cancer is only 10 percent and 3 percent, respectively.<sup>1</sup> In comparison to the other cardiovascular diseases such as mitral valve prolapse, peripartum cardiomyopathy, and eclampsia, CAD is most associated with mortality in women. In fact, one in three women die from CAD in this country.<sup>2,3</sup>

### Magnitude of the Problem

2.5 million women are hospitalized for cardiovascular disease (CVD) per year, of which 500,000 die. 244,000 women out of 500,000 die from CAD every year. CAD is a major disability factor in 36 percent of women ages 55 to 64, and 55 percent in women >75 years. The cost of combating this disease is estimated at \$60 billion/year. As we enter the next millennium, a projected 40 percent of females will be >45 years and consequentially, the prevalence of this disease will be on the rise.<sup>2,3</sup>

### Historical Perspective

Women have long faced bias when it comes to study participation involving CAD. Many of National Institutes of Health (NIH)-funded studies done in the 1960s through the 1970s primarily included men; the few studies that did include women were misleading because they included women who were below the age of 45. This bias resulted in a false sense of security when it came to treatment and the encouragement of prevention to women of all ages.

For instance, despite angina being more prevalent in women, the idea that only 15 percent develop myocardial infarction (MI) over a period of 10 years has led to a belief that angina is a benign problem in women.<sup>4</sup> Because of that, less attention was given to females with chest pain and a less aggressive approach to diagnosis. Furthermore, there has been a tendency toward under-utilizing therapeutic modalities in women; thrombolytics, beta blockers, aspirin, and coronary interventions are greatly underprescribed in females.<sup>5</sup> In addition, women were offered coronary artery bypass surgery less frequently. Loop and associates demonstrated that bypass surgery in women is not as effective as in men. Furthermore, it increased the mortality slightly. The risk/reward ratio was believed to be worse in women than in men.<sup>6</sup>

### Risk Factors

Cholesterol, diabetes, hypertension, and cigarette smoking, are recognized risk factors for CAD. The Framingham Heart Study demonstrated that risk-factor relationships in women are as strong or even stronger than those in men when they followed 2,300 men and 2,900 women.<sup>7</sup> Furthermore, menopause and oral contraceptives increase the relative risk of CAD.

### Cholesterol

The amount of cholesterol in the blood can be a risk factor for CAD. A 1-percent decrease in cholesterol translates into approximately 2 to 3 percent decrease in CAD risk.<sup>8</sup> Specifically, high density lipoprotein (HDL) in the blood and CAD risk are inversely related. Studies have shown that women with higher HDL have lower risk of CAD. HDL cholesterol has been shown to be only second to age among predictors of CAD risk.<sup>9</sup>

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**Table 1. Current Smoking and Coronary Heart Disease (CHD) Age-Adjusted Relative Risks and 95% CLs.<sup>23</sup>**

| Endpoint                | Nonsmokers | 1-14/day         | 15-24/day        | ≥25/day          |
|-------------------------|------------|------------------|------------------|------------------|
| Fatal CHD + Nonfatal MI | 1.0        | 2.1<br>(1.4-3.3) | 4.2<br>(3.3-6.1) | 6.0<br>(4.6-8.1) |

Cholesterol levels undergo notable changes during the life of a female. Until about age 20, cholesterol levels in both males and females are similar.<sup>10</sup> Up to age 55, cholesterol levels continue to increase gradually in women, but not as much as in men. At age 55, female cholesterol levels increase at a rapid pace and reach and/or exceed male cholesterol levels.<sup>11</sup>

Specifically, HDL levels differ significantly in males and females. After puberty, the HDL level in females remains high until menopause. After the onset of menopause, HDL levels decline slightly, but total cholesterol increases significantly; this leads to a lower HDL to total cholesterol ratio, which is associated with an increased risk for CAD. The Framingham Study has shown that a serum cholesterol of >245 mg/dL is associated with more than a three-fold increase in the risk of CAD in men aged 40 to 59. However, for women the risk of CAD was only 1.6 times greater. This suggests that although total cholesterol is an important risk factor in general, it does not exhibit as great an influence in female incidence of CAD<sup>12-13</sup> and that HDL to total cholesterol ratio is a more accurate measure of heart disease risk.<sup>14</sup>

#### Diabetes

Diabetes mellitus is a significant risk factor for CAD in women. It nullifies the pre-menopausal advantage of a favorable lipid profile. In addition, it exaggerates the risk when it co-exists with other risk factors. CAD mortality is approximately three to seven times higher in diabetic women in comparison to non-diabetic.<sup>15-17</sup>

The exact mechanism by which diabetes imparts an excess risk for ischemic heart disease is not clear. However, elevated levels of insulin has been postulated as an independent atherogenic factor in diabetes and women demonstrate higher insulin response to glucose loads. This phenomenon is perhaps responsible for the increased incidence of ischemic heart disease and its associated mortality in diabetic women.<sup>18,19</sup> Since adult onset diabetes often follows diet abnormalities and lack of exercise, it can be mitigated by preventive measures (exercise, diet control).

#### Hypertension

Hypertension is a significant risk factor contributing to CAD. The Framingham Study has revealed that hypertensive women ages 40 to 59 have a six-fold increase in the risk of developing CAD.<sup>12</sup>

A meta-analysis of pharmacologic treatment trials involving 37,000 patients (approximately half were women) has shown that in patients who suffer mild hypertension (90-114 mm Hg diastolic pressure), a decrease of 6 mm Hg diastolic blood pressure corresponded to statistically significant reductions in stroke, myocardial infarction, and vascular death by 42 percent, 14 percent, and 21 percent, respectively.<sup>20</sup>

Just as in men, the prevalence of hypertension in women increases with age. Therefore, preventive measures should be in place to reduce risk of hypertension, and thus CAD.

#### Cigarette Smoking

Smoking is the leading preventable cause of all deaths of men and women in the United States. Large numbers of case-control and observational cohort studies have shown that smoking more than doubles the incidence of CAD and increases mortality of CAD by 70 percent.<sup>21</sup> The Rochester Coronary Heart Disease Project (a population-based, case-controlled study) illustrated that cigarette smoking results in an increased risk of CAD.<sup>22</sup> Furthermore, risk for non-fatal MI increases from 1.4 for those women who smoke <15 cigarettes/day to 7.0 for >35 cigarettes/day. Table 1 shows current smoking and coronary heart disease age-adjusted relative risks.<sup>23</sup> Relative risk for MI was thirteen-fold for heavy smokers in comparison to nonsmokers in younger ages (25 to 39 years), while risk was five-fold for middle ages (45 to 49 years). These studies suggest that smoking increases the risk of CAD in young women who otherwise have very minimal or no risk for CAD and increases the already existing risk for CAD in middle aged and older women.<sup>22</sup>

Although there is a decreasing trend of smoking in adults, the prevalence of daily smoking among high school seniors is increasing and it is greater in girls than boys.<sup>24</sup> If this trend continues, it can result in increased incidence of CAD among young women.<sup>25</sup> Cessation can reduce the risk of CAD by as much as 50 percent in the first year of cessation, and reaching that of nonsmokers in two to 10 years.<sup>11</sup>

Menopause

This is a known risk factor for CAD in women because of the physiologic changes associated with this natural process. In post-menopausal women, the incidence of CAD rapidly rises to that of male levels.

Among the several beneficial effects of estrogen on cardiovascular protection, its effect on lipid profile, increasing the HDL, which in turn decreases the HDL to total cholesterol ratio provides the most protection from CAD in women. After menopause, the HDL level in the blood decreases with a resultant decrease in the HDL to total cholesterol ratio, losing the protective effect. In addition, estrogen's effect on the vascular endothelium of lowering the diastolic blood pressure is also lost, adding to CAD risk.<sup>11</sup>

As was concluded in the Nurses' Health Study, estrogen replacement therapy (ERT) can reduce CAD risk in postmenopausal by about 44 percent.<sup>26</sup> Other studies have arrived at a similar statistically significant figure.<sup>27</sup> The physiologic benefit of ERT is that it has been shown to increase HDL levels by 20 to 30 percent, and reduce low density lipoprotein (LDL) cholesterol levels by 10 to 15 percent, reduce lipoprotein A levels, and increase levels of apolipoprotein AI.<sup>28</sup> Although ERT does reduce the risk of CAD by as much as 40 to 50 percent,<sup>28</sup> it has to be administered with caution, as it increases the risk of endometrial cancer and gall bladder disease. Currently, the risk of ERT on breast cancer is under debate; it is possible that ERT slightly increases the incidence of breast cancer for those women who have used ERT for a prolonged period (more than 15 years) and have a family history of breast cancer.<sup>29</sup> Using ERT in combination with a progestational agent may help in reducing endometrial cancer risk; however, its benefit in decreasing CAD risk remains unclear. A large-scale study is being done by NIH to clarify the effects of the combination of progestational agent with estrogen therapy on cardiovascular risk.

Obesity

The Nurses' Health Study has shown that those women who are excessively overweight with body mass index (BMI)  $\geq 29$  have at least a three-fold higher risk of CAD than those with BMI  $< 21$ .<sup>30</sup> Even being moderately overweight with BMI 25 to 29, poses a considerable risk for CAD, almost twice as much as having a BMI  $< 21$ .

Obesity is an additive factor to risk of CAD because it worsens coronary risk factors such as

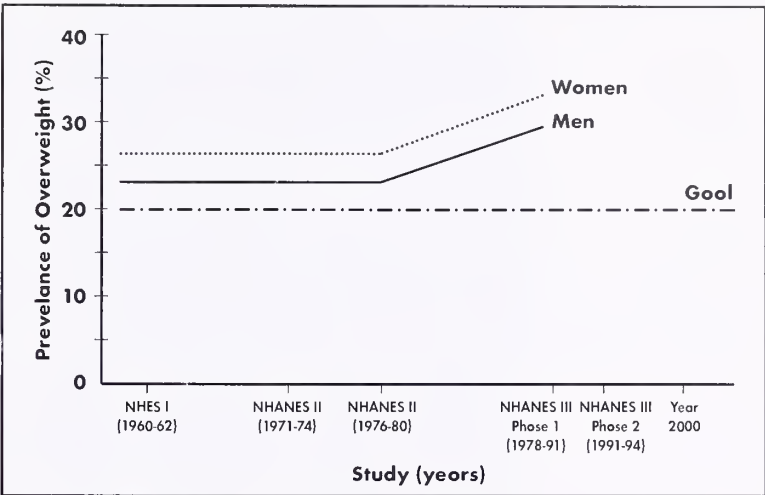


Figure 1: Prevalence of obesity among USA adults.<sup>31</sup>

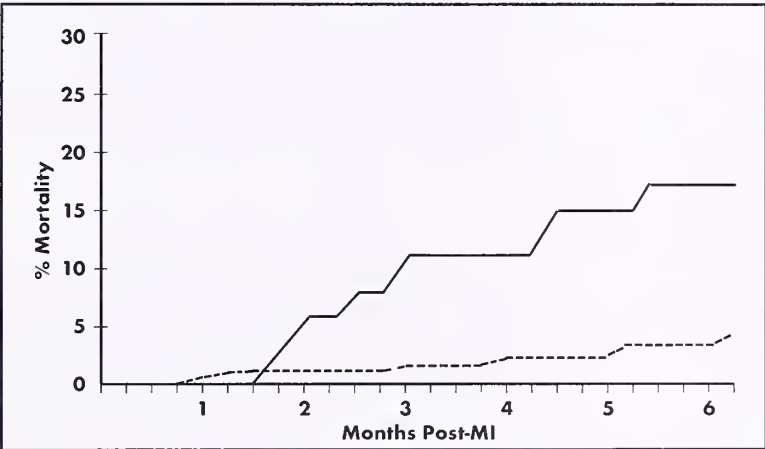


Figure 2: Cumulative mortality for depressed and non-depressed patients.<sup>34</sup>

hypertension, diabetes, and hypercholesterolemia. Data from NHANES III shows that in the last two decades, the prevalence of obesity in the US is on the rise.<sup>31</sup> The NHANES study defined overweight as BMI  $\geq 27.8$  for men and  $\geq 27.3$  for women. As shown in Figure 1, during Phase I of the NHANES III period, more than 30 percent of all adults are overweight in this country.<sup>31</sup>

Although no direct evidence exists to show that weight loss reduces the risk of CAD (because of the small number of subjects who can maintain weight loss),<sup>32</sup> it is understandable that weight loss accomplished through diet modification and increased activity can have widespread benefit to the body by helping reduce or prevent hypertension, stress, and hypercholesterolemia, which are risk factors leading to CAD.

### *Personality Type*

The personal attributes of an individual can also serve as risk factors for CAD. Type A personality, i.e. those who are competitive, time-urgent, achievement-oriented, easily aroused, angry, and hostile, face a greater risk of CAD than type B.<sup>33</sup> In fact, it has been suggested that this type of personality is as important a risk factor as cigarette smoking, hypertension, or hypercholesterolemia.<sup>33</sup> The Framingham Study has confirmed that there is an association between type A personality and CAD in women.<sup>7</sup>

As shown in Figure 2,<sup>34</sup> it has also been found that depression may influence CAD in women. Data from the Recurrent Coronary Prevention Project has shown that women with depression faced a greater risk of post-MI mortality. Low levels of emotional arousal to challenge and physical slowness were identified as personality attributes of this depressive type personality.<sup>35</sup> Furthermore, the Stockholm Study has concluded similarly; women who display exhaustion, less ability to cope, worse quality of life, and diminished hope for the future were at a greater risk for CAD than matched controls.<sup>36</sup>

### *Oral Contraceptives*

When high dose oral contraceptives are used, it increases the relative risk of CAD by increasing LDL, glucose intolerance, blood pressure, fibrinogen, and decreasing HDL cholesterol.<sup>37</sup> The absolute increase in risk by use of oral contraceptives is only 1 percent among women under 40.<sup>38,39</sup> However, oral contraceptive use in the presence of other risk factors such as smoking and hypercholesterolemia results in a strikingly elevated risk for non-fatal and fatal MI.<sup>38</sup>

Use of oral contraceptives may also exaggerate other risk factors such as hypertension and diabetes mellitus. Short term (less than five years) use of low dose (<30 mcg estrogen) contraceptives has shown no significant increase in the incidence of CAD compared to non-users.<sup>40</sup> Currently, the long-term relationship between low dose oral contraceptives and CAD risk is not clearly understood.

### **Lifestyle Facts**

#### *Physical Activity*

A sedentary lifestyle increases the risk for CAD. Large meta-analysis studies have concluded that moderate exercise in women can reduce the risk of CAD by as much as 50 percent.<sup>41</sup> Twenty-seven percent of women do not perform leisure time exercise. It is recommend-

ed that women incorporate moderate exercise [at least 6 metabolic equivalents level of activity (mets)] into their weekly routine. Aerobic exercise at least 20 minutes for three days/week is not only beneficial for the heart muscle, it helps increase HDL and weight loss, which also decreases CAD risk.

### *Alcohol Consumption*

The Nurses' Health Study has found that compared to non-drinkers, women who consumed 10 to 15 gm alcohol/day were at a 40 percent lower risk of CAD.<sup>42</sup> The beneficial effect of moderate alcohol consumption is increased HDL levels and increased HDL to the total cholesterol ratio, which has a protective effect. One should exert caution that excess alcohol can result in cardiomyopathy, mitigating the protective effects of decreased CAD risk.

### *Low-Dose Aspirin*

Although there is a debate on the appropriate dosage of aspirin, studies have shown that low-dose aspirin has more benefits than harm. For example, men and women who have a history of occlusive vascular disease clearly benefit in secondary prevention of subsequent vascular events by low-dose aspirin. In both men and women in the acute phase of MI, aspirin reduces fatal and non-fatal vascular events.<sup>43</sup>

Data obtained for the primary prevention benefits of aspirin are exclusively derived from studies on males. The US Physicians' Health Study, a placebo-controlled trial of 325 mg aspirin on alternate days, concluded a significant 33 percent reduction of a first MI.<sup>44</sup> This study did not confirm the effects of aspirin on cardiovascular mortality or stroke. In women, consideration must be given to the observation that their MI to stroke ratio is lower than that of men. Therefore, although aspirin may reduce the chance of first MI in women, it is possible that it could increase risk of stroke. The answer to this question will be provided by the ongoing randomized, double-blind, placebo controlled Women's Health Study among 40,000 women health professionals, aged 45 or older. This study will assess the benefits and risks associated with low dose aspirin as well as vitamin E in the prevention of CAD and cancer.<sup>45</sup>

### *Anti-oxidant Vitamins*

The benefit of using antioxidant vitamins is postulated to result from their effect of inhibiting the oxidation of LDL cholesterol and/or its uptake into coronary artery endothelium.

Whether this reduces risk of CAD is still not clear, as it is difficult to distinguish between the small to moderate effects of the antioxidant agents and the health characteristics of those individuals who voluntarily participate in the study.

Although large-scale randomized trials have been completed on well-nourished individuals, because of the insufficient sample size, dose, duration of treatment, and follow up, it has been difficult to arrive at a reliable conclusion.<sup>45</sup> The trials done have ranged from four to 12 years, and have found no benefit on CAD risk from supplementation with beta-carotene,<sup>46,47</sup> vitamin E,<sup>46</sup> or a combination of beta-carotene and vitamin E.<sup>48</sup> In patients who suffered atherosclerosis, a trial involving supplementation of vitamin E found that it decreases non-fatal MI but not overall cardiovascular mortality.<sup>47</sup> As more evidence is gathered from ongoing trials such as the Women's Health Study<sup>45</sup> (vitamin E in primary prevention) and Women's Antioxidant Cardiovascular Study<sup>49</sup> (beta-carotene, vitamin E, and vitamin C among high-risk women), we can be better informed about the benefits of antioxidant vitamin therapy.

## Conclusion

Coronary artery disease is a significant problem in women and should not be ignored. The outcome of CAD can be changed by educating women, increasing physician awareness, and strongly encouraging risk modification measures. "An equal opportunity killer needs equal opportunity management."<sup>50</sup>

## The Authors

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*"One does not ask of one who suffers: What is your country and what is your religion? One merely says: You suffer, this is enough for me; you belong to me and I shall help you."*

Louis Pasteur, 1822-1895

Speech at the opening of the Philanthropic Society's Refuge for Mothers, June 8, 1886

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## Health Care Fraud Enforcement in 1999

Robert G. McCampbell, JD

In the current legal and political environment, it is apparent that health care providers will be under more scrutiny for fraud and abuse issues than ever before. Fortunately, some of the areas on which government enforcement personnel will be concentrating are known. This article will review the resources to be devoted to fighting health care fraud and discuss the specific areas to be targeted by enforcement officials.

### Enforcement Resources

The primary source for health care fraud enforcement resources is the Health Insurance Portability and Accountability Act (HIPAA), enacted in 1996.<sup>1</sup> That act provided for automatic, graduated appropriations to the Department of Justice (DOJ) and the Office of Inspector General of the Department of Health and Human Services (OIG). For fiscal year 1999, DOJ will receive more than \$66 million, and OIG will receive more than \$90 million in appropriations dedicated to enforcement of health care fraud laws. Additionally, the Medicare Integrity Program will receive more than \$550 million, much of which will be devoted to enforcement activities.

The increase in appropriations has allowed the OIG to open many new offices including offices in Oklahoma City. The increased funding also will allow the OIG to significantly increase Operation Restore Trust. Operation Restore Trust was an anti-fraud initiative originally targeting the states of California, Florida, Illinois, New York and Texas. The program will be expanded to cover 26 states, including Oklahoma (Fig. 1).

1999 will also see the advent of "Program Safeguard Contractors" working with Medicare fiscal intermediaries and carriers. The

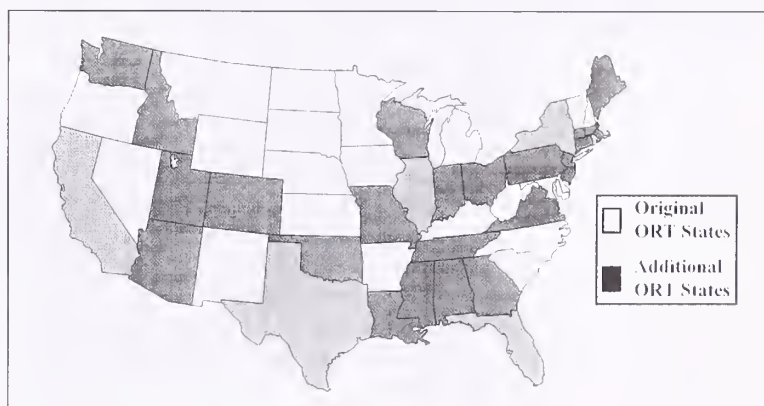


Figure 1. Operation Restore Trust (ORT) Expansion

Department of Health and Human Services announced a program to hire these specialized health care fraud contractors in March of 1998 and issued requests for proposals. Contracts were awarded May 15, 1999. These Program Safeguard Contractors will use sophisticated computer analysis and other methods to identify and target health care fraud.

The trend of increasing use of *qui tam* lawsuits in the health care industry will continue. The so-called *qui tam* provisions in the Federal False Claims Act allow private citizens to bring an action where they believe the government to have been defrauded. As shown on Figure 2, the use of *qui tam* has been significantly increasing in the last several years fueled mostly by an increase in the use of the *qui tam* provisions against health care providers. Also a "bounty" program for reporting Medicare billing fraud was announced on Feb. 24, 1999, pursuant to a mandate contained in the HIPAA.<sup>2</sup> The regulations provide for a private citizen to receive a bounty of up to \$1,000.00 for reporting Medicare billing fraud.

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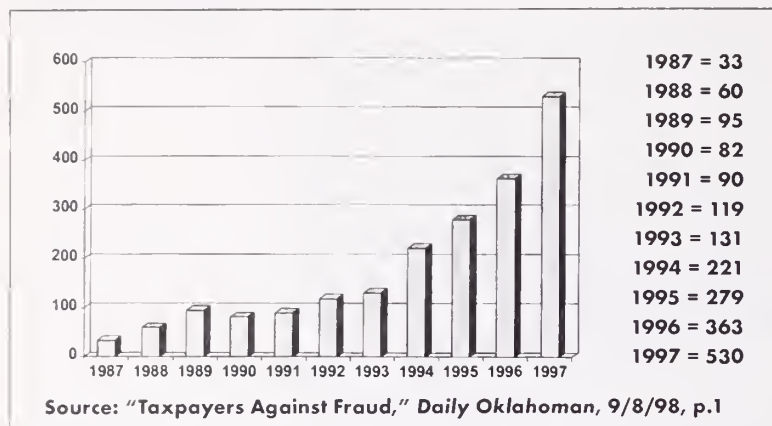


Figure 2. Federal "Taxpayer Lawsuits" filed, by fiscal year.

### Government Targets

Various government agencies have announced plans for targeted enforcement in the coming year. For instance, the OIG has published its 1999 Work Plan providing a long and detailed list of the various topics it will examine. Some of the more significant areas the OIG will investigate include the following:

- evaluation and management coding
- billing for psychiatric and psychotherapy services
- physicians with excessive nursing home visits
- DRG coding
- same-day discharge and readmission to a hospital
- automatic encoding software for billing which improperly increases bills
- reduced access to home health services.

The OIG has separately identified outpatient laboratory unbundling as an enforcement focus in the coming year as well.

The coming year will also see an increased level of enforcement in the managed care area. DOJ has announced a plan to target managed care fraud issues, particularly 1) improper marketing practices, 2) "cherry picking" healthy beneficiaries, and 3) withholding necessary service. As one top DOJ enforcement lawyer stated, "The managed care organizations' standard answer is to say 'no' until someone makes them say 'yes.'"<sup>3</sup> This type of sentiment among enforcement attorneys will cause an increase in investigations of managed care organizations.

In Oklahoma, the Medicaid Fraud Control Unit of the Oklahoma Attorney General's Office will continue to be active. That Unit is expected to target false billing and other schemes to defraud Medicaid.

On Jan. 10, 1999, the OIG published a Special Fraud Alert entitled "Physician Liability for Certifications in the Provision of Medical Equipment and Supplies and Home Health Services." This Special Fraud Alert announces the targeting of OIG enforcement efforts against physicians ordering home health care without assessing the patient's need for it or for authorizing unnecessary durable medical equipment. In particular, the OIG will look for physicians who 1) prescribe services and items as a courtesy to a patient, service provider, or medical equipment supplier, without first making a determination of medical necessity, 2) knowingly or recklessly sign false or misleading medical certifications, or 3) accept financial considerations in return for their signature.

1999 has also marked the implementation of a new civil monetary penalty regulation providing for penalties in three new situations.<sup>4</sup> First, providers billing a federal health care program for the services of an excluded provider are subject to a civil monetary penalty of up to \$10,000.00. For example, under this regulation, a hospital could not bill a federal health care program for the services of a physician who had been excluded. Second, the new rule allows a penalty of up to \$25,000.00 for health plans failing to make required reports to the Healthcare Integrity and Protection Data Bank. Third, the new rule allows a money penalty of up to \$50,000.00 for violations of the Anti-Kickback Act. The use of a civil money penalty is significant in regard to the Anti-Kickback Act because previously the only sanctions allowed were a) a criminal conviction, or b) exclusion from federal health care programs. The new regulation is intended to increase the number of providers sanctioned since the less drastic remedy of civil monetary penalties will now be available.

During the next year the OIG will continue to issue compliance guidance documents. During 1998 the OIG issued compliance guidance documents for hospitals, clinical laboratories, home health agencies, and billing companies. These guidance documents are not model compliance plans; the OIG states that an effective compliance plan for a health care provider must be individually tailored for the circumstances of that provider. However, the guidance documents provide material information regarding what the OIG thinks is necessary for an effective compliance plan. The OIG is currently working on additional compliance guidance documents for nursing homes, Medicare+

Choice, hospice organizations, and durable medical equipment providers.

The Healthcare Integrity and Protection Data Bank is scheduled to become operational in October 1999.<sup>5</sup> This will provide a centralized resource for collecting and accessing reportable events against a health care provider. The reportable events include the following:

- civil judgments related to the delivery of health care
- criminal convictions related to the delivery of health care
- state or federal licensing action against a provider
- exclusion of a provider from participation in a federal health care program
- other adjudicated action against a provider as established by regulations.

The regulations explicitly provide for non-reporting of a) settlements which include no findings or admission of liability, and b) medical malpractice judgments.

1999 has seen the beginning of the OIG's newly announced Provider Self-Disclosure Protocol.<sup>6</sup> This Self-Disclosure Protocol is a simplified and expanded version of a voluntary disclosure program utilized by the OIG in the first phase of Operation Restore Trust. The new Provider Self-Disclosure Protocol will differ from the earlier program in that a) it will have expanded scope both in geographic coverage and because every type of provider can take advantage of it, and b) a provider can take advantage of the Self-Disclosure Protocol even after an investigation of that provider has begun. Significantly, the Self-Disclosure Protocol contains no guaranteed protection against civil or criminal liability under the False Claims Act or from exclusion from participating in federal health care programs.

## Conclusion

There are several defenses available to a provider finding itself under investigation.

- The facts and issues must be thoroughly and vigorously investigated.
- A billing mistake does not constitute fraud. As DOJ has acknowledged, "Mere negligence, mistakes, and inadvertence, however, do not amount to false claims, and DOJ does not and will not bring False Claims Act actions against doctors and hospitals for honest billing errors."<sup>7</sup>
- The Government Accounting Office has recognized that Medicare statistics on which investigations are based are sometimes in error.<sup>8</sup>
- Implement a compliance program. A program can solve problems before they get out of control. Further, enforcement officials have stated repeatedly that the existence of a compliance program will be taken into account in evaluating the appropriate sanctions to be brought against a provider.
- Where billing was done pursuant to advice received from Medicare or some other authoritative source, and that advice can be documented, such advice can provide an effective defense.

In the current environment, enforcement efforts must be a concern for every health care provider. However, with due care and proper planning, a provider can hopefully avoid becoming the target of an in-depth investigation. □

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## Endnotes

1. Pub. L. 104-191.
2. Pub. L. 104-191, Section 203(B) (2).
3. Federal resources are stacking up to tackle healthcare fraud, In: Sheehan J, *Modern Healthcare*, Philadelphia, March 9, 1998; p. 33.
4. 63 Fed.Reg. 58399 (Oct. 30, 1998).
5. 62 Fed.Reg. 46736 (Sept. 2, 1998).
6. 63 Fed.Reg. 58341 (Oct. 30, 1998).
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8. *Medicare: Application of the False Claims Act to Hospital Billing Practices*, GAO/HEHS-98-195.

## Oklahoma Notes Decline in *Haemophilus influenzae*: Invasive *Haemophilus influenzae* Disease Among Children Aged <5 Years — Oklahoma, 1990-1997

Anthony K. Lee, MPH; James M. Crutcher, MD, MPH

*Haemophilus influenzae* (Hi) causes many clinical illnesses such as meningitis, bacteremia, epiglottitis, pneumonia, otitis media, sinusitis and tracheobronchitis.<sup>1</sup> Before the introduction of the *Haemophilus influenzae* type b (Hib) conjugate vaccine in 1988, Hib caused more than 95 percent of invasive Hi disease in developed countries.<sup>2</sup> Conjugate vaccines were licensed for use in children  $\geq 15$  months of age in 1989 and for use in children  $\geq 2$  months of age in 1990.<sup>3</sup> During 1987-1995, the incidence of invasive Hi disease among children <5 years of age decreased 96 percent in the United States.<sup>4</sup> This report summarizes the trend in invasive disease caused by Hi among Oklahoma children <5 years of age. The data represents cases reported to the OSDH as part of the infectious disease surveillance system. Invasive Hi disease has been reportable by law in Oklahoma since 1983.

During 1990-1997 in Oklahoma, 181 cases of invasive Hi disease were reported among children aged <5 years: 123 (68%) cases of Hib, 19 (10%) cases of non-type b Hi, and 39 (22%) cases of unknown serotype. From 1990 to 1997, the number of reported Hib cases decreased 99 percent (from 75 [32.5 per 100,000] to one [0.4 per 100,000]), and the number of reported Hi cases attributable to unknown serotype declined 100 percent (from 21 [9.1 per 100,000] to 0) (Table 1). The number of non-type b Hi cases has remained constant, averaging 2.4 cases per year (1.0 per 100,000).

During 1990-1997, a majority of the invasive non-type b Hi disease cases among children aged <5 years were reported from the Oklahoma City and Tulsa MSA (74% [14 of 19]). Overall, 20 (26%) of the 77 counties in Oklahoma reported at least one case of invasive non-type b Hi disease. The average annual incidence rate of invasive

non-type b Hi disease was higher for the Tulsa MSA (1.8 per 100,000) than the rate for the rest of the state (0.7 per 100,000).

The average incidence rates of invasive non-type b Hi disease were higher among black children than white children (2.1 vs. 0.6 per 100,000, respectively;  $p = 0.04$ ) (Table 2). The proportion of cases aged <1 was almost twice as high among non-type b Hi cases (89% [17 of 19]) than Hib cases (48% [55 of 123]),  $p < 0.001$ . The average annual incidence rate of non-type b Hi was similar for males (1.1 per 100,000) and females (1.0 per 100,000).

In conclusion, the incidence rate of invasive Hib disease has decreased dramatically since the introduction of the Hib conjugate vaccine with a relatively constant rate of invasive non-type b Hi disease among children <5 years of age in Oklahoma. Vaccine failures are rare. Hib vaccination status of Hib invasive disease cases among children <5 years of age in Oklahoma from 1995-1997 is shown in Table 3.

For information on other public health topics, visit the Oklahoma State Department of Health Web site at [www.health.state.ok.us](http://www.health.state.ok.us).

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**Table 1. Number and Rate<sup>1</sup> of *Haemophilus influenzae* Invasive Disease Cases Among Children Aged <5 Years, by Year and Serotype — Oklahoma, 1990-1997**

| Serotype                | 1990 |        | 1991 |        | 1992 |       | 1993 |       | 1994 |       | 1995 |       | 1996 |       | 1997 |       |
|-------------------------|------|--------|------|--------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
|                         | No.  | Rate   | No.  | Rate   | No.  | Rate  | No.  | Rate  | No.  | Rate  | No.  | Rate  | No.  | Rate  | No.  | Rate  |
| Type b                  | 75   | (32.5) | 36   | (15.6) | 2    | (0.9) | 2    | (0.9) | 4    | (1.7) | 3    | (1.3) | 0    | (0.0) | 1    | (0.4) |
| Non-type b <sup>2</sup> | 0    | (0.0)  | 1    | (0.4)  | 2    | (0.9) | 3    | (1.3) | 4    | (1.7) | 2    | (0.9) | 4    | (1.8) | 3    | (1.3) |
| Unknown                 | 21   | (9.1)  | 3    | (1.3)  | 3    | (1.3) | 6    | (2.6) | 2    | (0.9) | 1    | (0.4) | 3    | (1.3) | 0    | (0.0) |

1. Per 100,000 children < 5 years of age

2. Includes serotypes a, c, d, e, f and nontypeable Hi

**Table 2. Number<sup>1</sup> and Rate<sup>2</sup> of *Haemophilus influenzae* Non-type b Invasive Disease Cases<sup>3</sup> Among Children Aged <5 years, by MSA<sup>4</sup> and Race/Ethnicity — Oklahoma, 1990-1997**

| MSA                | White |       | Black |       | Hispanic <sup>5</sup> |       | Native American |       | Other <sup>6</sup> |        |
|--------------------|-------|-------|-------|-------|-----------------------|-------|-----------------|-------|--------------------|--------|
|                    | No.   | Rate  | No.   | Rate  | No.                   | Rate  | No.             | Rate  | No.                | Rate   |
| OKC <sup>7</sup>   | 2     | (0.4) | 3     | (3.5) | 0                     | (0.0) | 0               | (0.0) | 0                  | (0.0)  |
| Tulsa <sup>8</sup> | 4     | (1.2) | 1     | (2.1) | 0                     | (0.0) | 1               | (2.6) | 0                  | (0.0)  |
| Remainder of State | 3     | (0.5) | 0     | (0.0) | 0                     | (0.0) | 0               | (0.0) | 1                  | (16.5) |
| Entire State       | 9     | (0.6) | 4     | (2.1) | 0                     | (0.0) | 1               | (0.5) | 1                  | (4.4)  |

1. Number of cases during the 8-year period

2. Per 100,000 children

3. Race/ethnicity data were not available for 37 cases

4. Metropolitan Statistical Area

5. Hispanic can be of any race

6. Numbers for other racial/ethnic groups were too small for meaningful analysis

7. Canadian, Cleveland, Logan, McClain, Oklahoma, and Pottawatomie counties

8. Creek, Osage, Rogers, Tulsa, and Wagoner counties

**Table 3. *Haemophilus influenzae* Type b Vaccination Status of Hib Invasive Disease Cases Among Children <5 Years — Oklahoma, 1995-1997**

| Year | Age      | Appropriately Vaccinated for Hib at Onset of Illness |
|------|----------|--|
| 1997 | 2 months | Y  |
| 1995 | 1 year   | Y  |
| 1995 | 4 years  | Y  |
| 1995 | 5 months | N <sup>1</sup>                                       |

1. Only received one vaccination at 3 months of age

## **Dr. Kelly West and a Brief History of the Diabetes Epidemic of American Indians**

Richard Green

### **Introduction**

After 6000 BC, the new generation of hunter-gatherers could not count on a regular supply of big game as a source of sustenance. For the nomads, the onset of winter was a time to hunker down. Many bands sought refuge in caves and rock shelters gouged out of the sides of steep canyons. There groups of Indians settled in during late fall, carefully storing away what provisions they had been able to collect on their journeys. As the days shortened and snow dusted the landscape, hunters made frequent forays to stalk game. Left behind in some caves were twig figurines of animals that may have been used by hunters to charm the spirits of wild creatures before stalking them. Meanwhile gatherers prepared for the hard months ahead by culling the edible parts of dozens of plants. As winter progressed and the more perishable items were depleted, the cave dwellers relied largely on wild grains. By early spring the stores of grain and meat in their caves were exhausted. The people dispersed and roamed the countryside again in small bands, scavenging for roots and berries or pursuing sparse game during the lean season that preceded the burst of new growth.

Some scientists theorize that these nomadic tribes had a "thrifty" gene, which served them well for many generations. Their bodies may have been genetically programmed to store every calorie they ate to survive the lean times between hunts. But as the 18th and 19th century Indians were forced to give up the hunt and acculturate to some extent into American society, more and more of them adopted a sedentary lifestyle. By the 20th century, the thrifty gene was no longer a blessing, but a curse. Instead of enabling the descendants of the hunter-gatherers to survive, the gene was actually contributing to their unprecedented obesity. And by the 1940s, a manifestation of that obesity, Type 2 diabetes, was beginning to grow to epidemic proportions within the tribes of North America.

### **I.**

After Tom Coniglione finished his internal medicine residency at Yale University in 1971, he owed the government two years of service. Instead of being dispatched to the military — as he was expecting — he was assigned to the Indian hospital in Lawton, Oklahoma. Culture shock awaited this life-long urban citizen of the East Coast, but that was not all.

As he began the daunting task of serving as the only Indian Health Service internist for thousands of Indians living in southwestern and southcentral Oklahoma, Coniglione was "astounded at the magnitude and severity of Type 2 diabetes and its complications. It looked to me like almost half of the adults over 40 [years old] had diabetes. Many of them didn't know they had diabetes. I just wasn't prepared for anything like this. When I consulted the texts, I found virtually nothing [that was helpful]."

In fact, cardiovascular disease was said to be very rare among Indians, but during Coniglione's first year, he had seen numerous cases among diabetics. He had also seen diabetics with retinopathy, neuropathy, renal failure, foot ulcers and gangrenous toes and feet. The number of Indian amputees he came across was "astounding." Following a more extensive search of the literature, he found several citations to an M.D. named Kelly M. West, evidently an expert in the international epidemiology of diabetes. As luck would have it, Dr. West was based at the University of Oklahoma Health Sciences Center, only 100 miles away.

Although West had conducted several epidemiological studies, he was an epidemiologist not by training, but through experience. Although his research was methodical, exacting and rigorous, his articles were models of good writing, remarkably free of jargon, clear and concise. His professional training had been in internal medicine and

his specialty was diabetes. In the early 1950s he spent a year as a diabetes research fellow at the Joslin Clinic in Boston where he was inspired by Elliot P. Joslin himself to begin systematic studies of what he called "the diabetes epidemic."

Coniglione called West and told him about his shocking observations. West was definitely interested. In 1964, he had found that the prevalence of diabetes among Cherokee (of North Carolina) adults over 30 years of age exceeded 25 percent — at that time the highest known rate in the world. He also found that diabetes prevalence exceeded 33 percent of middle-aged Mississippi Choctaws. And he knew that in the mid-1960s Dr. Peter Bennett, of the National Institutes of Health, had discovered that about half of the Pimas (of Arizona) over 40 years of age had hyperglycemia.

What these and other populations that were studied by West, Bennett and few others had in common besides high rates of diabetes were correspondingly high rates of obesity. Although other factors were also associated with diabetes, obesity held the strongest correlation. West's studies can be traced back to the early sixties and may have originated after he got one of his former medical students, John Kalbfleisch, a job with an international division of the National Institutes of Health. "I was part of a team surveying the nutritional status of certain underdeveloped countries that wished to participate," says Kalbfleisch, a Tulsa cardiologist. "Kelly thought this would be a great opportunity to look at diabetes and heart disease in conjunction with the planned surveys. So we added blood glucose and glucose tolerance to the numerous other screenings including weight, blood pressure and cholesterol."

The director of NIH's international division was Dr. Martin Cummings, who had been a colleague of West's in the OU Department of Medicine. "I knew Kelly had an interest in international medicine, and I also knew that he was an extraordinarily talented, intelligent guy, so I asked him to become my deputy and help set up international research programs." Cummings made an astute choice and noted: "Despite Kelly's quiet demeanor, he had the knack to inspire people to do things." He got programs established in Israel and Hong Kong, among others. In the process of globe trotting for NIH, "Kelly noticed the differences in diabetes rates among various ethnic groups," Cummings says. "I remember him coming back to Bethesda and saying, 'Somebody ought to do something about this [the epidemiology of diabetes].'"



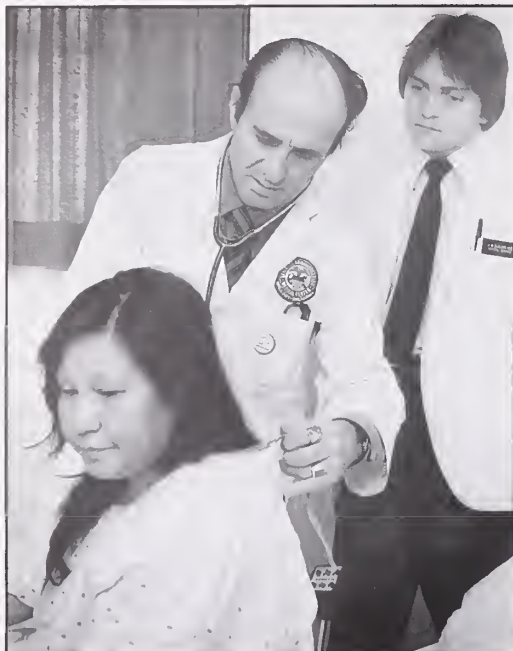
**The leanness of these Camanche Indians is evident in this photo taken around 1890.**

*Photo by William J. Lenney; courtesy of the Archives and Manuscripts Division of the Oklahoma Historical Society.*



**This Kiawa in 1947 symbolizes the physical transition in body fat among most Indians in America.**

*Photo courtesy of the Archives and Manuscripts Division of the Oklahoma Historical Society.*



**Dr. Everett Rhodes examines a patient as Dr. J.M. Blalock observes. (January, 1981)**

*Photo courtesy of OU Photographic Services.*

It proved to be a rhetorical remark.

From 1962 to 1964, Kalbfleisch, and sometimes West, traveled to several foreign countries to do the nutrition surveys. "I did all the work and he did all the writing," Kalbfleisch says, somewhat tongue-in-cheek. In 1966, they reported in *Diabetes* that "the nutritional factor which most consistently correlated with the prevalence of diabetes was the total caloric intake (in relation to body size and energy expenditure)." While the diabetes prevalence rates in the Third World countries were all single digit — ranging from 1.5 percent in East Pakistan to 7.3 percent in Venezuela — the rates in Bangor, Pennsylvania, (home of OU Department of Medicine chair Stewart Wolf) and among the Cherokees of North Carolina were 17 percent and 25 percent, respectively. Subsequently, West and Kalbfleisch reported that while the study's prevalence rates varied widely, the differences were insignificant when the races were matched for obesity. As caloric intake increased, so did the rate of diabetes.

## II.

West eagerly accepted Coniglione's invitation to visit the Indian hospital. After a day or two of examining patients, Coniglione recalls West saying that the rates of diabetes and complications there could be as bad or worse than anywhere. West proposed a more comprehensive study to

better understand the magnitude of the problems.

While Coniglione was stunned by the number of Indian diabetics, one of West's Department of Medicine colleagues was not even surprised. He was Dr. Everett Rhoades, the first Kiowa physician and one of only a few Indian physicians of any tribe in the US at that time. Growing up in the Meers area near Lawton, Rhoades had seen first-hand evidence for years of what he considered to be a diabetes epidemic. Rhoades also had been a medical student of Kelly West's at OU and admired him enormously for his scholarship and "love of medicine and Native Americans."

Coniglione and Rhoades introduced West to other IHS officials and tribal leaders to enlist their help and support in the proposed study. "Kelly was up-front and very respectful," Coniglione recalls. "He wanted to be sure that everything he proposed to do was all right with them. He said that whenever he learned anything new he would discuss it with them. There was the sense that this was not his project, but a genuine collaboration. He was offering tribal members the opportunity to find out how many people had diabetes, so that we could get them into treatment."

West and Coniglione did their first preliminary screening in the summer of 1972. They set up card tables at tribal meetings and pow-wows and did blood-sugar screening. When West returned to Lawton, he brought some medical students to help; he also dashed off grant proposals to garner the support needed to gather and analyze the data. All this was beside his normal heavy workload as a professor of medicine at the Health Sciences Center and his international work on the epidemiology of diabetes. His colleagues from that period say that although he was low key, talked in a monotone and was very deliberate, he was always working, conducting and writing up his research and exchanging a voluminous amount of professional correspondence. This included his special interests in continuing medical education and medical libraries. When he wasn't actually working, they agree, he was talking about his work to whomever would listen. He was both dedicated and a Type A personality par excellence.

Probably this personality trait was, in part, inherited from his ancestors. His father, W. Kelly West, was the "father" of orthopedic surgery in Oklahoma, and his grandfather, Archa Kelly West, the dean of the Epworth Medical School — the forerunner of OU's medical school. But part of Kelly's obsessive work habits may have stemmed from a life-altering event. As a young man, he was handsome, intelligent, ambitious

and athletic. In Oklahoma City, Kelly was known to be quite the eligible bachelor and a highly competitive tennis player. It is said that he was playing tennis when his world turned upside down. During a match when he was in college or medical school, he suffered an intracranial bleed. In the hospital, he learned that he had an inoperable angioma. From that time, he stopped playing tennis and reigned in his emotions, permitting no intimate relationships to develop in his life. He told a friend he had never married because he "didn't want to be a burden to anyone." Kelly felt it was "just a matter of time" before he had another potentially crippling or lethal bleed. Despite his outward scrupulously modulated behavior, however, Kelly's angioma also may have been the pilot light of his ambition to make every day count.

West was 47 years old when he met Coniglione in 1972; he had eight more years to live.

### III.

The Lawton area Indian project had both public health and research objectives. Two goals, West stated, were to study and control the problem of diabetes in Oklahoma Plains Indians. With his wide array of contacts, West fashioned a collaborative effort, including the Indian Health Service, the Oklahoma State Health Department and the World Health Organization (WHO). WHO lent its prestige and credibility, but no financial support. So, West courted the Lawton-based McMahon Foundation, which supplied a small grant to support activities limited to the Lawton area. To expand the studies to other tribes, West would need other financial sources. He tailored his correspondence and press releases to various audiences. In some, the emphasis was on the WHO goal: how to account for the great differences in prevalence of diabetes and its complications among several nations. In other communications, the emphasis was on detecting diabetes as early as possible, "thereby reducing the possibility of complications."

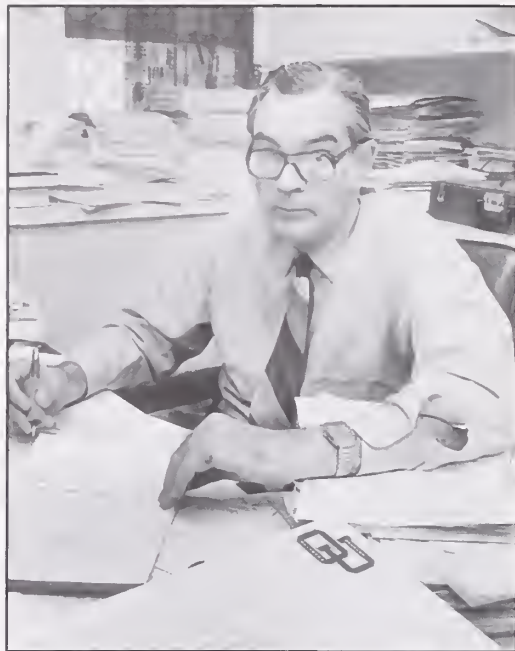
The evidence implicating obesity as the major cause of Type 2 diabetes among Indians was strong but not yet overwhelming. West needed to be as sure as possible that tribes had little or no history of obesity or diabetes. For several years, he had been collecting turn-of-the-century photographs of Indians of various tribes. Coniglione recalls West showing him a large batch of his photographs and noting the absence of obesity in virtually all of the adults. West also had interviewed elders from 20 tribes in an attempt to find

anecdotal cases of diabetes, and found none prior to 1936. West also reviewed the medical reports of physicians serving the Oklahoma Indians between 1832 and 1939 and found "no evidence of the presence of diabetes."

But by 1940, obesity in middle-aged Indian adults was becoming more common. The epidemic of Type 2 diabetes would begin showing up in a few tribes within a few years. In the 1950s, the epidemic expanded substantially geographically and in severity. In the 1960s, it had become "massive," to use West's characterization. The genie, so to speak, was out of the bottle. Although West knew the numbers would only get worse as more cases were diagnosed, getting a handle on the numbers was key to understanding the sources of the epidemic. For example, many clinicians still believed that increased sugar consumption was the cause of the escalating number of cases of diabetes. In the early 1970s, West knew the numbers didn't support that supposition. He was determined to bring the medical community up-to-date on the "massive" epidemic by reviewing diabetes rates and related observations in an effort to separate genetic from environmental factors.

He did so in his tour de force, "Diabetes in American Indians and Other Native Populations of the New World," which ran in the October 1974 issue of *Diabetes*, the journal of the American Diabetes Association. West combined his own research with a careful reading and analysis of all available literature. He found that while the data didn't rule out genetic factors as playing a role in determining inter-tribal differences in diabetes prevalence and manifestation, "it is clear that environmental factors exert powerful effects."

Oklahoma tribes, he wrote, were of special interest because they represented seven of the eight major linguistic groups of North America Indians. Whereas before 1940, diabetes was rare or nonexistent among these tribes, its rate among them was now high. But in some tribes, the Hopis, Navajos, some Apache subgroups and Eskimos, the prevalence rates were substantially lower than the United States' white population. All tribes tested by Kalbfleisch and West in Central America in the early sixties had very low rates. West wondered if these tribes possessed genetic immunity to diabetes. The data, though preliminary, suggested the answer was no. To the contrary, environmental factors were "mainly responsible for these inter-tribal differences in rates." For example, although diabetes was still uncommon in the Athapascan tribes of Canada



**Dr. Kelly West (June 1980)**

*Photo courtesy of OU Photographic Services.*

and Arizona, the disease had become common in their Oklahoma brethren (the Kiowa-Apache and Ft. Sill Apache).

West estimated in 1974 that between 5 and 6 percent of Oklahoma Indians had known diabetes. But 46 percent of the increasing population was under the age of 20 while 95 percent of diabetics were over the age of 34. Moreover, West extrapolated from data he produced himself among three substantial groups of Oklahoma Indians to conclude that occult diabetes was common. Actual rates, he wrote, were much higher than known rates. By combining known with estimated occult rates, West estimated that one-third of Oklahoma full-blood Indians over 30 years of age had diabetes.

He wrote that "we have diligently" looked for an Oklahoma tribe in which diabetes was less common, but despite the great diversity of their origins, all of the tribes had four things in common:

- \* Diabetes was probably rare prior to 1940.
- \* Diabetes is now common to all.
- \* All tribes were previously slender in build.
- \* All are now obese.

As expected from studying so many diabetics whose disease was of such short duration, data on complications were often incomplete and inconclusive. But enough evidence was available to be ominous. Renal problems were common to all tribes of Indian diabetics, but rates of retinopathy

and cardiovascular disease were highly variable. Very little data on vascular disease of the lower extremities were available, though West reported that he had "recently seen more than 50 amputees among the Oklahoma Indian diabetics." Whether gangrene was as common to Indian diabetics as white diabetics, he could not yet say.

West's article was the first comprehensive analysis of the data, and as such, was groundbreaking. But many important questions remained to be answered, particularly regarding complications. Specifically, how were diabetes' manifestations influenced by factors such as diet, adiposity, blood pressure, serum lipids, blood glucose levels, and genes? Studying Indian populations was, in many ways, ideal because Indians received almost all of their health care from a single source (IHS) and were less mobile than other ethnic groups, so researchers could make serial observations over time. Aside from that, it was well known that West admired and respected Indian people and genuinely wanted to help improve the care of these diabetics.

The light he shed on the epidemiology of Indian diabetes in 1974 he could subsequently magnify onto the epidemiology of diabetes worldwide. But a comprehensive review and critical analysis of the international literature would be a mammoth undertaking. Most people with any semblance of a life away from work would never even consider it. To West, whose life was his work, it was a logical next step, albeit a giant one.

Though he sacrificed income to produce the book in the years ahead, some of his expenses were defrayed by a 1975 grant from the National Library of Medicine. Despite the fact that his former colleague, Marty Cummings, had become the NLM director, Cummings says he did not arrange the grant. "I might have steered him our way, but Kelly didn't need any help like that from me."

The 1978 book, *Epidemiology of Diabetes and Its Vascular Lesions*, was a "masterpiece," according to West's colleague, Dr. Peter Bennett, whose studies of the Pima Indians for the National Institutes of Health continue to this day. Bennett is chief of the Phoenix epidemiological clinical research branch of the National Institute of Diabetes and Digestive and Kidney Diseases. "Kelly was a very diligent researcher, both in gathering and interpreting data." The book secured for West the unofficial but widely acknowledged title, "the father of the epidemiology of diabetes." Through the NLM network, West retrieved and reviewed about 5,000 pertinent publications, from which a bibliography of

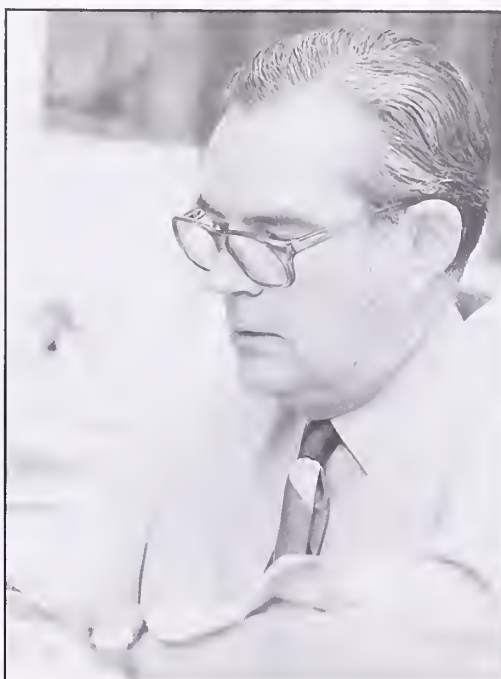
about 2,500 was presented in the last 114 pages. One of West's former OU colleagues, Dr. Carmen Bahr, recalls that the publisher insisted that "Kelly's bibliography be cut in half."

What the world-wide evidence demonstrated, among other things, was the misguided nature of the widely held belief that obesity was only a precipitating factor in those genetically predisposed to diabetes. "Obesity alone is quite capable of producing diabetes, and often does," West wrote. Furthermore, epidemiology and insulin-secretion studies together have demonstrated that pancreatic beta cells often return to normal functioning if obesity is checked long-term. Thus, the evidence reported in the book demonstrated, as West emphasized, that a "preventive and a cure are *already* [emphasis West] at hand for most diabetes."

Meanwhile, with additional grant support from local, state and national agencies, West and his collaborators had continued to recruit more Oklahoma Indians to the original 1972 cohort at the Lawton Indian hospital. By 1979, 2,095 adult Indians were enrolled from 27 counties arrayed across the southern half of the state. Some 1,085 were diagnosed with Type 2 diabetes and 1,010 were classified as nondiabetic. (Type 1 diabetes was very rare among Indian tribes.) The sampling represented an epidemiological "gold mine" which could be excavated for new information and findings for years to come.

Although the value of West's research was always recognized by funding agencies and his research peers internationally, his status on the faculty at the OU Health Sciences Center was not congruent with his national and international reputation. Some of his HSC colleagues, such as Dr. Bahr, says that the Department of Medicine leadership was never entirely comfortable with him, insinuating that professional jealousy may have played a part. While he had had the title professor of medicine since 1965, his primary appointment was elsewhere. For most of the 1960s, he served as professor of continuing education. Later, he was a professor of biostatistics and epidemiology in the smallest and poorest of the HSC colleges, the College of Public Health.

Nevertheless, in the wake of the acclaim heaped on West outside of Oklahoma for his many contributions to the field, especially his recently published 550-page "masterpiece," the university in 1979 appointed him to a prestigious "George Lynn Cross Research Professorship." In bestowing the honor and a check for \$5,000 on West, OU President William S. Banowsky cited his research, which he pointed out "attracted hundreds of thou-



**Dr. Kelly West (June 1980)**

*Photo courtesy of OU Photographic Services.*

sands of dollars to the university," 140 research publications, and his study of diabetes in Oklahoma Indians. Banowsky also mentioned in a general HSC faculty meeting that President Jimmy Carter had named West to the Board of Regents of the National Library of Medicine.

One aspect of West's career that Banowsky did not mention — because few had made the connection — was the likelihood that West's research and analysis on the epidemiology of diabetes among American Indians was mainly responsible for a sizeable congressional appropriation in the late 1970s to establish model diabetes treatment programs. While Everett Rhoades can't document cause and effect, he says it would be "hard to believe that Kelly's influence was not operative to some degree." Rhoades should know. He had been a consultant to the Indian Health Service for years and in 1982 became the first Indian to be appointed director of the IHS.

#### **IV.**

In the summer of 1980, Marty Cummings asked his friend, Kelly, to head a delegation to China to help the Chinese government computerize their medical library holdings. "After diabetes, Kelly's other great love was medical libraries and like anything he was interested in, he made it his business to be well informed," Cummings recalls. West accepted the invitation and despite the fact

that the weather was very hot, he kept to the itinerary, traveling to several of the major cities. "I got reports that Kelly was breaking down [political and ideological] barriers wherever he went," Cummings says.

On July 28, 1980, West broke down himself. He was in a city about 60 miles from Peking when he complained to another physician of a severe headache. He probably told his companion that he was very likely experiencing another intracranial bleed. Within minutes, West was unconscious. He was bussed to Peking, and then flown on a Chinese jet to Hong Kong where a team of neurosurgeons waited. The brain damage, however, was too extensive and Kelly West died at age 55.

Cummings says he feels he is somewhat responsible for Kelly's death. "I knew about his aneurysm. I just flat-out asked him once why he'd never gotten married and he told me. He used to stay in our house in Bethesda whenever he was there, and I considered him to be practically my fourth son." Cummings seemed to be saying that a man who wants to protect his children should have thought twice about sending one of them with a time bomb in his head out to work in China during a hot summer.

Honors were awarded posthumously; an endowed fund was set up to establish the "Dr. Kelly West Memorial Lectureship," at the HSC. And his mother, Miriam West, donated his papers and books to the HSC Library. They are contained in 140 boxes as part of the Library's special collections. But what would have pleased Dr. West the most occurred in the office of Dr. Paul Anderson, the dean of the College of Public Health. He asked a faculty member in the Department of Biostatistics and Epidemiology, Dr. Elisa Lee, to complete the work on two of Dr. West's NIH-sponsored research projects on Oklahoma Indians. Even though she was being asked, Dr. Lee, as a junior faculty member, didn't think she could refuse. But she wished she could have. She was a statistician who knew almost nothing about diabetes nor American Indians.

Worse, when she began sifting through Kelly West's data, she was dismayed to realize that much of what he needed to conduct the research must have been in his head. "I'm sure it all made sense to Dr. West, but at first I had real problems." When she realized that the studies were largely followup, based on West's original 2,095 Indian volunteers, things went easier. With assistance from two of West's former collaborators, Drs. Tom Coniglione and Carmen Bahr of the OU Department of Medicine, Lee completed one of

the studies and published her initial article on Indian diabetics in *Diabetes Care* in 1985.

The article covered the relationship between diabetes and familial diabetes, obesity and other possible risk factors. She found that frequency of diabetes among siblings was significantly higher in families with one or two diabetic parents than those without affected parents. About 77 percent of all subjects were obese, but 84 percent of the diabetics were obese. Furthermore, diabetics were more obese at age 18 and at the interview than non-diabetics. Women with upper-body obesity were much more at risk of developing diabetes than their pear-shaped counterparts.

It was reported that middle-aged Plains Indian women believed that they should weigh about 50 pounds more than what would be considered ideal by upper-class white women. Comanche women expected to gain considerable amount of weight between 20 and 40 years of age. The diabetes rate and obesity level increased significantly as the degree of "Indianness" (blood quantum) increases. Average quantum of Indian blood was 90 percent in the study. Lee hypothesized that "Indianness" is "directly related to the Indian diet, concept of ideal weight, and metabolic system that they have established to suit their earlier lifestyle."

The article, which was dedicated to the memory of Kelly M. West, was Elisa Lee's debut in what has been a highly successful research career. In the 1980s and 1990s, federal funding was and has been available to researchers seeking to shed more light on the staggering and ever-increasing rates of diabetic complications, and Lee has been resourceful and talented enough to attract a sizeable share. Since her initial study, this native of Yunshing, China, has been principal investigator of more than \$16 million of NIH-funded projects involving the epidemiology of diabetes risk factors and its complications, including cardiovascular, vascular, kidney and eye diseases.

The legacy of Kelly West lives on through her work. J

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## OSMA Welcomes New Officers

Congratulations to the following newly-elected OSMA officers:

### President

Boyd O. Whitlock, MD  
Tulsa

### President-Elect

Robert J. Weedn, MD  
Duncan

### Vice President

Gary F. Strebel, MD  
Oklahoma City

### Secretary-Treasurer

Jack J. Beller, MD  
Norman



*1999-2000 OSMA Officers are (front row, from left) Bruce L. Storms, MD, Chickasha, Speaker of the House of Delegates; Boyd O. Whitlock, MD, Tulsa, President; Mary Anne McCaffree, MD, Oklahoma City, Immediate Past President; Gary F. Strebel, MD, Oklahoma City, Vice President; David S. Russell, MD, Enid, Chairman, Board of Trustees; (back row, from left) John R. Bozalis, MD, Oklahoma City, Vice Speaker of the House of Delegates; Robert J. Weedn, MD, Duncan, President-Elect; and Jack J. Beller, MD, Norman, Secretary-Treasurer.*

Continuing in their current offices are:

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### Speaker

### House of Delegates

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### Immediate

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## Award Winners Recognized During OSMA Annual Meeting



*Hundreds of Oklahoma schoolchildren will learn to live healthier lives as the result of a program spearheaded by John R. Bozalis, MD, Oklahoma City (above). Dr. Bozalis, shown here with Chairman of the Board of Trustees Dr. David S. Russell, was presented with the OSMA Community Service Award for his work as program director of the Schools for Healthy Lifestyles project.*

The OSMA Award for Community Service went to **John R. Bozalis, MD**, Oklahoma City, for his work with the Schools for Healthy Lifestyles project, an Oklahoma County-based program with plans to go statewide.



Former New York Yankee great and Oklahoma City resident **Bobby Murcer** was honored with the **Don J. Blair Friend of Medicine Award** for his work in helping to educate young people about the dangers of smoking and tobacco use. **Presidential Citations** were awarded to **Harold D. Thiessen, MD**, for his work with the Physicians' Recovery Program and to **Edward N. Brandt, Jr., MD**, for his accomplishments in the area of state legislation and regulation.

The **Best Journal Cover Award** went to **William S. Harrison, MD**, of Chickasha for the second year in a row. Dr. Harrison's award-winning photo was a mid-winter scene that graced the cover of the January/February 1998 issue of the *Journal*. The **Charlotte S. Leebron Memorial Award** was presented to **J. Michael Crutcher, MD; E. Kristen Moody, MPH; Robert W. Barker, PhD; and Jennifer L. White, MS**, for their paper entitled "Ticks and Tick-Borne Diseases in Oklahoma," published in the November 1998 issue of the *Journal*. **Thomas C. Cannon, MD, MPH**, received the **Mark R. Johnson Excellence in Medical Writing Award** for his article entitled "Child Homicide in Oklahoma: A Continuing Public Health Problem," also published in the November 1998 *Journal*.



*As one of her last official acts as OSMA President, Dr. Mary Anne McCaffree presented Presidential Citations to Edward N. Brandt, Jr., MD, Oklahoma City (photo at left) and Harold D. Thiessen, MD, Mustang (photo above). Dr. Brandt was recognized for his accomplishments in the area of legislation and regulation while Dr. Thiessen was honored for his work with the Physicians' Recovery Program.*

## AMA Meeting Scheduled

The American Medical Association (AMA) will convene the 1999 Annual Meeting of its House of Delegates June 20-24 at the Chicago Hilton and Towers Hotel in Chicago. The House will open at 9 a.m. on Sunday, June 20. Reference Committees will meet on Sunday afternoon and all day Monday. The AMA Organized Medical Staff Section, Young Physicians' Section, Resident and Fellow Section, and Medical Student Section will convene on June 17.

The OSMA will be represented at the meeting by eight elected physician delegates and eight alternate delegates. Handbooks will be mailed to all delegates on May 28. For further information regarding the meeting, please refer to the AMA Web site at [www.ama-assn.org](http://www.ama-assn.org) or contact Barbara Matthews, OSMA, at 405.843-9571.

## Tobacco Billboards a Thing of the Past

As a result of the \$206 billion agreement signed by 46 state attorneys general and four tobacco companies last November, the companies agreed to remove all billboard and transit advertising by April 23 and to turn over any remaining time on the leases to the states.

In a prepared statement, J.R. Nida, MD, Oklahoma's Commissioner of Health, said, "We will use this billboard space, and every other opportunity, to enhance Oklahoma's efforts at preventing this deadly addiction among our children." Dr. Nida also reported that an average of 40 Oklahoma children become addicted to nicotine every day and that more than 6,000 Oklahomans die prematurely from diseases caused directly by tobacco products each year, more than from any other preventable cause.

The American Medical Association, long an outspoken foe of tobacco companies, also applauded the removal of the billboards. Randolph D. Smoak, Jr., MD, Chairman of the AMA Board of Trustees, called April 23 a "day of victory." He also said, "America's state governments cannot let the removal of tobacco billboards go down in history as the most powerful victory won by the tobacco settlement. While the AMA celebrates this historic moment, we also know that the tobacco settlement can inspire even greater victories. But that will only happen if the settlement money is used where it can be most effective – in comprehensive tobacco control programs designed to help smokers quit and to prevent our children from picking up that first cigarette."

The OSMA is also taking an active position in seeking to ensure that monies received by the state of Oklahoma from the tobacco settlement be earmarked first for increasing the budget for tobacco cessation and prevention programs, for treating nicotine addiction, and for treating diseases related to nicotine addiction and tobacco use. A resolution to that effect was passed by the OSMA House of Delegates at its recent Annual Meeting, and other efforts in this regard will be forthcoming.

D. Robert McCaffree, MD, vice chair of the Tobacco-Free Oklahoma Coalition and member of the OSMA's Council on Public and Mental Health, said, "It's critical that the OSMA and individual physicians make their voices heard about the use of these funds. It would be inconceivable to think that the funds received from some of the organizations who sold products that created these addictions and health problems should be used for any other purpose than to try and help undo some of the damage those products have caused."

## The Extinguisher Pays Surprise Visit to OSMA Annual Meeting

Members of the House of Delegates and others attending the 93<sup>rd</sup> Annual Meeting of the OSMA were treated to a surprise visit by *The Extinguisher* during the opening session on Friday, April 16. *The Extinguisher*, a cartoon superhero, and his mentor, Dr. Nola Know, are part of the American Medical Association's nationwide campaign to educate children about the dangers of smoking.

Under the joint sponsorship of the OSMA and the Oklahoma County Medical Society, *The Extinguisher* visited three Oklahoma City elementary schools on the day before his Tulsa appearance. The Oklahoma City visit was in conjunction with Schools for Healthy Lifestyles, a health awareness program now in its second year in which 13 elementary schools are currently participating.



*Giving a 'Thumbs Up' for the Good Guys is a formidable SWAT team of anti-smoking foes. Dr. Robert McCaffree (left), vice-chair of the Tobacco-Free Oklahoma Coalition and member of the OSMA's Council on Public and Mental Health, joined the AMA's anti-smoking superhero The Extinguisher, Tobacco-Free Oklahoma Coalition member Alice McGrew, and Dr. Mary Anne McCaffree in presenting a united front against Oklahoma's leading preventable cause of death and disease.*

## News from the State Capitol

The Forty-Seventh Oklahoma Legislature's Sine Die (the last day of session) was scheduled for May 28. The deadline for bills to be reported from the floor was April 15. Bills that passed both houses but are not yet finalized will go to Joint Conference Committee (JCC). Once the provisions of the bill are agreed upon, a Conference Committee Report (CCR) is submitted for a vote. CCRs cannot be amended on the floor of either house. All appropriation bills go to the Joint Conference Committee on Appropriations (JCCA).

The Oklahoma State Medical Association has had a very large tracking list this session. The status of the legislative bills of greatest interest to the OSMA and its members is as follows:

**HB 1443, Oklahoma Health Care Quality Improvement Act (Peer Review)**, by Betty Boyd of the House. After five months of negotiations between representatives of the Coalition for Quality Patient Care and the Oklahoma Trial Lawyers Association, an agreement was reached regarding the language for this legislation, which was, at press time, to have been voted on by both houses. This bill specifies that information generated during the peer review process, such as the identities of those health care providers serving on the peer review committee and records of their deliberations, is confidential and privileged. In a very limited circumstance, the opinion of the peer review committee in a case of negligence against a health care provider may be discoverable, but not admissible, until there is a verdict of negligence by a judge or jury.

**Mental Health Parity, SB 2**, by Angela Monson of the Senate and Loyd Benson of the House, mandates insurance coverage for schizophrenia, bipolar disorder, major depression, panic disorder, obsessive-compulsive and schizoaffective disorder. Coverage would be provided at levels commensurate with benefits for treatment of all other physical diseases and disorders. Premium cost increases shall not exceed 2 percent or the provisions would not apply to the insurance plan. The proposal stipulates that it would not apply to policies that provide coverage for a specified disease or other limited benefit coverage or groups with 50 or fewer employees or to large self-insured companies. Passed the Senate and House. At press time, this bill had gone to the Governor for action.

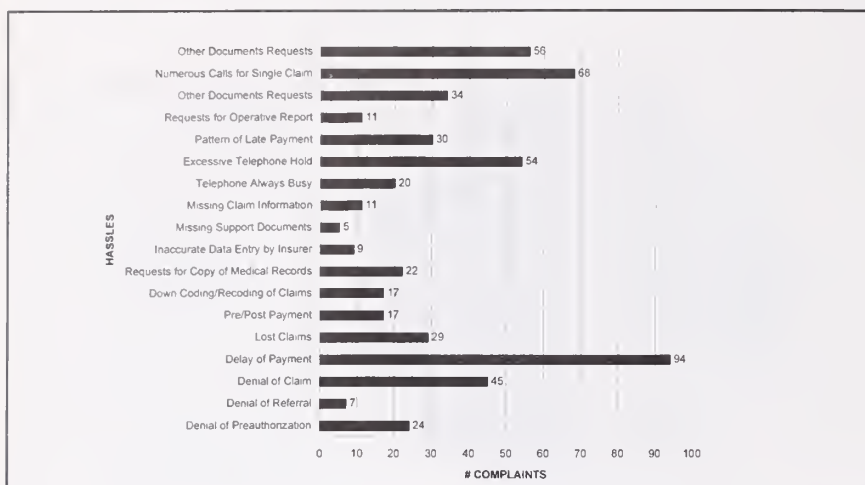
**HB 1381**, by Russ Roach of the House and Brad Henry of the Senate, amends the **Oklahoma Do-Not-Resuscitate Act** by inserting a hierarchy of persons, including family members, into the decision-making process of persons eligible to inform the attending physician that the incapacitated person, whose wishes are not known, would not have consented to the administration of CPR and that nothing in the act shall require any physician or health care provider to take any action contrary to reasonable medical standards. The OSMA, Oklahomans for Life, and the advocates for aging groups have reached agreement on the terms of this legislation. At press time, this bill was in Joint Conference Committee.

**HB 1368, Genetic Research Study Nondisclosure Act**, by Betty Boyd of the House and Ben Brown of the Senate, amends the Genetic Non Discrimination Act passed in the 1998 session by outlining procedures for the handling of genetic research material based on the informed consent of the patient. Signed by the Governor.

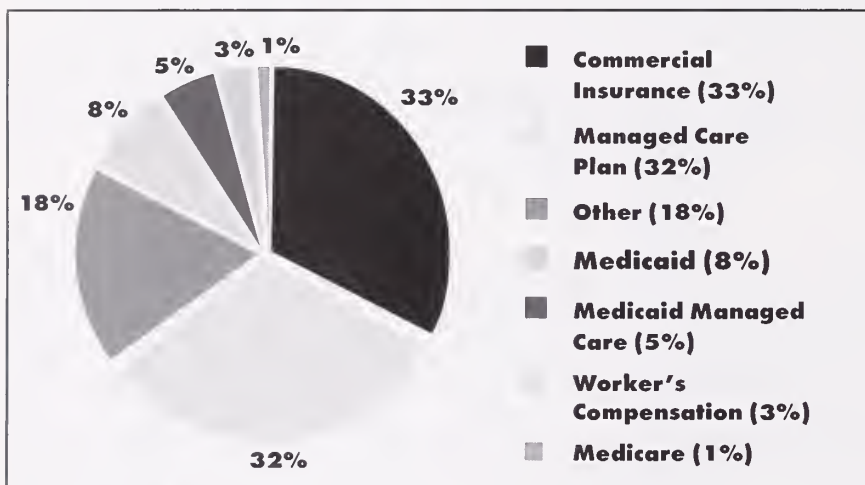
**SB 290, Trauma Care Assistance Revolving Fund**, by Ben Brown of the Senate and Bill Paulk of the House, creates a revolving fund in the State Treasury administered by the Department of Health which shall not be subject to fiscal year limitations and may be expended as follows: 90 percent shall be used to reimburse recognized trauma facilities for uncompensated trauma care and 10 percent shall be used by the Department in the furtherance of its powers and duties set forth in the Emergency Medical Services and Care Systems Act. Funds for the revolving fund shall be obtained by increasing certain fines paid by persons convicted of traffic violations and by minimal increases in drivers' licenses and inspection and registration fees. At press time, this bill was in Joint Conference Committee.

A complete Legislative Summary highlighting the outcome of all bills of interest to OSMA members will be prepared after the session ends and sent to all OSMA members. If you have questions about legislation, please contact Kathy Musson, OSMA Director of Governmental Affairs, at 800/522-9452 or 405/843-9571.

## Hassle Factor Data Compilation October 1, 1997 to March 1, 1999



**Figure 3. Hassles by Hassle Type**



**Figure 4. Hassles by Program Type**

\* Figures only include logs that specified a program type

## Results

The information tabulated has been separated into the following areas: Hassles by City (Fig. 1), Hassles by Carrier (Fig. 2), Hassles by Hassle (Fig. 3), and Hassles by Program Type (Fig. 4).

## Discussion

To increase the accuracy of the data collected, the OSMA will provide additional information to physician office staff to improve the accurate

completion of "Hassle Factor" forms. Through the Council on Medical Services, the next Hassle Factor data will be compiled in August 1999.

Additional resources are also available on the Internet should you need further assistance.

The association also recommends Linda Scoggins from Hartzog, Conger & Cason for legal counsel, 405/235-7000.

## Action

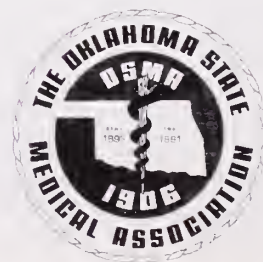
Compiled results have already been presented to the Department of Insurance. On March 29, 1999, the OSMA met with the Insurance Commissioner to discuss insurance problems related to issues of discussion included regulation of PPOs; delayed payments by health insurers; due process for "deselecting" physicians from Drs.' panel; and PLICO.

The Commissioner was provided data collected from hassle factor logs. Per the Commissioner's request, OSMA will be forwarding specific case documentation reflecting the detailed problems our physicians are having obtaining insurance reimbursement.

Further action against other third party entities will be determined by the Council on Medical Services.

## References

1. *Texas Medical Association, (1998), Private Insurance Initiative.*
2. *AMA Policy Compendium, <http://www.ama-assn.org/>, H-180.973 "The Hassle Factor."*



## Appendix I



# Hassle Factor Log

## Oklahoma State Medical Association

Physician Name \_\_\_\_\_ Specialty \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Contact Person \_\_\_\_\_

Request in relation to: (circle one) Medicare      Medicaid      Workers Comp.  
Managed Care Plan      Commercial Ins.  
Other: \_\_\_\_\_

Name of Carrier or Agency: \_\_\_\_\_

Time spent on problem: Staff time (hours) \_\_\_\_\_ Physician Time (hours) \_\_\_\_\_

Type of problem: (circle all that apply)

|                            |                                      |                                 |
|----------------------------|--------------------------------------|---------------------------------|
| Denial of Preauthorization | Down Coding/Recoding of Claims       | Excessive Telephone Hold        |
| Denial of Referral         | Requests for Copy of Medical Records | Pattern of Late Payment         |
| Denial of Claim            | Inaccurate Data Entry by Insurer     | Requests for Operative Report   |
| Delay in Payment           | "Missing" Support Documents          | Other Documentation Requests    |
| Lost Claims                | "Missing" Claim Information          | Numerous Calls for Single Claim |
| Pre/Post Payment Review    | Telephone Always Busy                | Other (specify) _____           |

Brief description of the problem:

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**\*Important:** The Oklahoma State Medical Association is attempting to document and tabulate "Hassles" by third party payors. We ask that you make multiple copies of this log and have your office staff/billing personnel fill one out for each instance. After we have accumulated a sufficient number to demonstrate a pattern by third party payors, we will contact them and ask for resolution of the problem. However, we need specific documentation of the incidents and hope that you will help us so we can confront the insurance companies with these "Hassles."

Mail or fax responses to the OSMA Headquarters at fax 405-842-1834 or mail to 601 W I-44 Service Road, Oklahoma City, Oklahoma 73118

## Congratulations to the following newly elected 1999 OMPAC Officers and Directors

Jack J. Beller, MD, Chairman  
Lee Schoeffler, MD, Vice Chairman

Sherry Strebel, Secretary-Treasurer

### OMPAC Board Members

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C. Wallace Hooser, MD  
Doug Hubner, MD  
Frank Phelps, MD  
Lee Schoeffler, MD

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Carl Hook, MD  
Bruce Storms, MD

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Richard L. Winters, MD



**Oklahoma  
Medical  
Political  
Action  
Committee**

A complete listing of all OMPAC Members will be printed in a future edition of the *OSMA Journal*. For additional information about OMPAC, contact Kathy Musson, OMPAC Director, at (800) 522-9452 or (405) 843-9571.

## Get Results and Find What You Need!

*Check out the classified advertisements in the  
Journal of the Oklahoma State Medical Association.*

### CLASSIFIEDS

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. Payment must accompany all submissions. Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 15th of the month prior to the month of issue (e.g., Dec. 15 for the Jan. issue).

#### Seeking Locum Tenens Coverage

Licensed in Oklahoma and wishing to relocate to practice general radiology. Contact L. R. Littleton, Jr., MD, 201 N. Sunset Dr., Winston-Salem, NC 27101

#### Office Space Available

1200 sq. ft. furnished office space. West of Penn Square Mall on North Pennsylvania. Available NOW. Call 840-2369 or fax 840-1103.

#### Position Wanted

Stroke neurologist. Experienced in setting up acute stroke treatment programs, stroke clinical pathways and stroke units. Respond to OSMA Journal Classifieds, 601 W 1-44 Service Road, Oklahoma City, OK 73118

**See what's available:** If you're looking for office space, equipment or staff, then read the Classifieds.

**Place an ad:** Whether you are looking for a job for yourself or looking to fill a need in your organization, place an ad in the Classifieds of the *Journal*.

**RATES:** 50 cents per word  
minimum of \$25 per ad  
deadline: 9th of the month prior

**Call the Journal at 405/848-2171 to  
Request a Classified Ad Order Form Today!**



# Oklahoma State Medical Association Continuing Medical Education

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Accredited Institutions

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Duncan

Hillcrest Medical Center -  
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Integrus Baptist Medical Center -  
Oklahoma City

Integrus Southwest Medical  
Center -  
Oklahoma City

Jane Phillips Medical Center -  
Bartlesville

Mercy Health Center -  
Oklahoma City

Norman Regional Hospital -  
Norman

Orthopaedic & Reconstructive  
Research Foundation -  
Oklahoma City

St. Anthony Hospital -  
Oklahoma City

Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

Valley View Hospital -  
Ada

**Deaconess Hospital** - Cyndi Nelson - 405-604-4979

June 21st Therapeutics in Arthritis 1 hour

**Jane Phillips Medical Center** - Ronda Riden - 918-333-1467

June 10th New Treatments in  
Alternative Medicine 12:00-1:00pm 1 hour

**Integrus Baptist Medical Center** - Rikki Caraway - 405-949-3284

June 4th Tumor Board 7:00 am 1 hour

June 11th Cancer Conference 7:00 am 1 hour

June 14th Common Vocal Disorders 7:00 am 1 hour

June 18, 25th Tumor Board 7:00 am 1 hour

**Mercy Health Center** - Debbie Stanila - 405-752-3806

June 3rd Prolonged Partial Thromboplastin  
Time Work Up 1 hour

June 10th Pathogenesis Treatment of  
Reflux Esophagitis 1 hour

June 17th Advances in the Management of  
Pediatric Asthma 1 hour

June 24th Helping the Patients Caregiver Survive 1 hour

June 2, 9, 16, 23, 30th  
Tumor Board 7:00-8:00 am 1 hour

June 15th NeuroScience Institute  
Lecture Series 7:00-8:00 am 1 hour

**Irwin Brown Office of Continuing Medical Education** -

Letricia Harris - 405-271-2350

June 9,10th PLICO Loss Prevention 2 hours

June 17th Reynolds Army Community Hospital  
CME Series 2 hours

June 20-23rd GRIPE '99 Summer Meeting  
Philadelphia, PA 18 hours

June 22-26th 2nd Annual Primary Care Update 39 hours

*For information regarding a listed course, call the appropriate  
contact. For information regarding CME requirements or  
becoming an accredited provider, call Barbara Matthews,  
OSMA CME Coordinator at 405-843-9571.*

# American Medical Association Organized Medical Staff Section (AMA-OMSS)

*invites your medical staff to be represented at the*

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Be part of the process. Send a representative\* from your medical staff to the **1999 Annual AMA-OMSS Assembly Meeting, June 17-21, in Chicago**. *There is no fee to attend.*

OMSS representatives can:

- Submit resolutions prior to the Assembly meeting.
- Testify at Reference Committee hearings and vote in the Assembly.
- Participate in special issues forums.
- Network at state and regional caucuses.
- Earn up to 9 hours of CME credit\*\* (*Topics include: physician compensation, coping with stress, the computerized patient record, credentialing for new procedures, influencing physician behavior through quality improvement and cost containment efforts, medical staff development plans, physician-patient dynamics, and federal and state government action.*)

For more information on how to register, call 800 626-3211 and ask for the Department of Organized Medical Staff Services or e-mail us at [omss@ama-assn.org](mailto:omss@ama-assn.org).

\* Must be an AMA member

\*\* The American Medical Association is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The American Medical Association designates this educational activity for up to 9 hours in Category 1 credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

American Medical Association  
Physicians dedicated to the health of America



## DEATHS



### **Henry D. Wolfe, MD 1917 - 1999**

Henry D. Wolfe, MD, died March 29, 1999. He was born on Feb. 15, 1917, in Bonham, Texas, and received his medical degree from the University of Tennessee College of Medicine in 1941. He served as a Medical Officer in the US Army from 1943 to 1945, and retired as a Colonel in the US Army Reserve. During his medical career, Dr. Wolfe served as president of the Medical-Dental staff at St. Joseph Hospital, medical examiner and director of the Choctaw County Health Department, an Alternate Trustee and Trustee for District 11 of the Oklahoma State Medical Association, and was a life member of the association.



### **Winfred L. Medcalf, MD 1928 - 1999**

Winfred L. Medcalf, MD, died April 1, 1999. He was born on Oct. 21, 1928, in Tecumseh, and received his medical degree from the University of Oklahoma School of Medicine in 1957. Dr. Medcalf served in the US Army from 1946 to 1948, and had been a life member of the Oklahoma State Medical Association since 1994.



### **Robert P. Dennis, MD 1920 - 1999**

Robert P. Dennis, MD, died April 6, 1999. He was born on Feb. 11, 1920, in Oklahoma City, and attended the University of Oklahoma School of Medicine, graduating with a medical degree in 1945. During World War II, Dr. Dennis served two years active duty, reaching the rank of Captain upon separation from the military. He had been a life member of the Oklahoma State Medical Association since 1984.



### **Emil F. Stratton, MD 1918 - 1999**

Emil F. Stratton, MD, died April 7, 1999. He was born on Feb. 26, 1918, in Fort Cobb, and received his medical degree from the University of Tennessee in 1946. From 1947 to 1949, Dr. Stratton served active duty in the United States Army. In 1989, Dr. Stratton became a life member of the Oklahoma State Medical Association.

## IN MEMORIAM

### 1998

|                                   |              |
|-----------------------------------|--------------|
| Jerry L. Puls, MD .....           | June 5       |
| James M. Behrman, MD .....        | June 5       |
| Charles N. Talley, MD .....       | June 14      |
| Thomas C. Points, MD, PhD .....   | June 15      |
| Charles M. Cameron, Jr., MD ..... | June 22      |
| Philip G. Tullius, MD .....       | July 4       |
| Louis H. Charney, MD .....        | July 8       |
| Ralph L. Walker, DO .....         | July 11      |
| Brook S. Bowles, MD .....         | July 20      |
| Edwin R. Shapard, MD .....        | July 28      |
| Paul L. Masters, MD .....         | August 6     |
| Douglas D. Leatherman, MD .....   | August 21    |
| Richard E. Carpenter, MD .....    | August 30    |
| Henry J. Freede, MD .....         | September 9  |
| Chester K. Mengel, MD .....       | September 14 |
| Leaford Thornbrough, MD .....     | September 27 |
| Alfred A. Hellams, MD .....       | October 4    |
| Sumner Y. Andelman, MD .....      | October 6    |
| Eric B. Meador, MD .....          | October 10   |
| Vance A. Bradford, MD .....       | October 23   |
| Joseph S. Raff, MD .....          | November 12  |
| Herbert J. Forrest, MD .....      | November 14  |
| Joseph N. Mitchell, MD .....      | December 23  |

### 1999

|                                |            |
|--------------------------------|------------|
| Thomas Edward Rhea, MD .....   | January 2  |
| H. Ben Yagol, MD .....         | January 19 |
| Fay Knickerbocker, MD .....    | February 6 |
| Ramon G. Blanco, MD .....      | March 5    |
| Neal A. Pickett, Jr., MD ..... | March 14   |
| Henry D. Wolfe, MD .....       | March 29   |
| Winfred L. Medcalf, MD .....   | April 1    |
| Robert P. Dennis, MD .....     | April 6    |
| Emil F. Stratton, MD .....     | April 7    |
| Carl W. Smith, Jr., MD .....   | April 8    |



### **Carl W. Smith, MD 1927 - 1999**

Carl W. Smith, Jr., MD, died April 8, 1999. He was born on March 20, 1927, in Lamonh, and attended the University of Oklahoma School of Medicine where he completed his medical degree in 1953. Prior to his medical education, Dr. Smith served two years active military service in the US Navy from 1944 to 1946. His professional affiliations included membership in Alpha Omega Alpha, the American Board of Internal Medicine, the American Board of Nuclear Medicine, the Endocrine Society and the Radiation Advisory Committee of Oklahoma, and was a member and past president of the Southwest Chapter of the Society of Nuclear Medicine. Dr. Smith had been a life member of the Oklahoma State Medical Association since 1993.

## LETTERS TO THE EDITOR

### MEDICAL HUCKSTERISM

TO THE EDITOR:

Have you ever wondered why good doctors don't advertise? They don't need to, right? They are so busy getting word-of-mouth referrals from satisfied patients and colleagues that there would be no point in advertising. So medical advertising must be the last refuge of the losers...or so the thinking used to go.

Nowadays, medicine seems a lot more tolerant of advertising. Most physicians, however, are still not comfortable with the practice. "Doctors who advertise are an embarrassment to those of us who don't," writes Dr. Oscar London (a pseudonym for a Berkeley internist).<sup>1</sup> Advertising is a lot like termites; you don't realize there's a problem until significant damage has been done. The damage, in this case, is to our professional reputations.

With managed care, advertising has been transformed into hucksterism in the drive for higher profits. Most physicians cringe when they see television ads and

gigantic billboards with actors and actresses portraying physicians. One physician felt that using actors was akin to false advertising. "What's the deal?" he asked. "Couldn't they find any doctors in their group they were proud of?" Maybe not.

I don't think these professional models are fooling anybody. They look too rested and way too eager. No evidence of fatigue or circles under the eyes since models don't get those pesky 2 a.m. calls to the emergency room. And no pasty white skin on these billboard docs; everybody looks like they just returned from a Caribbean cruise. These phonies look like they just can't wait to feel your pain or conquer the next medical crisis.

Then there are the corny slogans that advertisers love so dearly. Like the billboard with the highly original, "Well, well, well..." accompanied by the gigantic head of a "doctor" grinning from ear to ear like a moron. In the ridiculous claims department, "Practices make perfect," leaves little

room for improvement. Nothing humble about this bunch. Or how about, "We have the technology." Sounds like a line from a bad science fiction movie.

Some advertisers have equated bigger with better. But most patients don't give a rip that Megaclinic has hundreds of doctors covering all points of the compass. Patients just want access to their personal physician.

Finally, a disturbing trend has recently developed in medical advertising. Instead of hiring models to impersonate physicians, some managed care groups have gotten the bright idea to use their own real physicians. So check your contract, if you have one. The buck has to stop somewhere. The only ones really benefiting from medical advertising are the people selling it. Patients don't make health care choices from billboards.

J. D. Haines, MD  
Stillwater

#### REFERENCE

1. London, O. *Doctor Generic Will See You Now*. Ten Speed Press, Berkeley, Calif., 1996.

## CLASSIFIEDS

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. **Payment must accompany all submissions.** Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 9th of the month prior to the month of issue (e.g., June 9 for the July issue).

### RECRUITING SPECIALISTS

McAlester Regional Health Center, McAlester, Oklahoma is recruiting the following specialties: Pediatrics, Obstetrics-Gynecology, Cardiology, Pulmonary Medicine, Ophthalmology, Nephrology, Dermatology and Infectious Disease. Competitive net income guarantees, student loan assistance, equipment loans and full marketing support. McAlester is not a J-1 visa area. Contact: Vicki Schaff, Director Physician Services/Recruitment, 1-800 319-2455, Fax 918-421-8066. E-mail: [vschaff@mrhc.mcalester.ok.us](mailto:vschaff@mrhc.mcalester.ok.us).

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## DOCTORS' ROLE WITH END-OF-LIFE CARE

TO THE EDITOR:

It is with great sadness and disgust that I read page 39 of the January 1999 issue of the *OSMA Journal*.

I am sad that the *Journal* would devote a page to Dr. Siler with his one-sided comments that he respects a retired pathologist that helps kill people. Actually, he said, "I respect his courage and resolve in addressing 'America's cultural confusion about dying.'"

Yes, I am writing to complain. Who is Dr. Siler that he should be quoted in the first place? And if he is to be quoted, why not interview other physicians who are pro-life and anti-suicide? Dr. Siler is also wrong in his statement that the real issue is relief from pain. Actually the real issue whether or not doctors are going to be involved in killing patients or treating patients to relieve pain, suffering, depression, et cetera.

James W. Carley, MD  
Stillwater

**Editor's Note:** Jack Kevorkian, MD, was convicted of second-degree murder tied to a lethal injection he administered, videotaped and replayed on 60 Minutes. He was sentenced to serve 10 to 25 years in prison. (American Medical News, April 12 & 26, 1999).

## Oklahoma Allergy & Asthma Clinic



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Suite 518  
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Charles D. Haunschild, MD<sup>++</sup>  
James H. Wells, MD<sup>\*o</sup>  
John R. Bozalis, MD<sup>\*o</sup>  
Warren V. Filley, MD<sup>\*o</sup>  
James R. Claflin, MD<sup>++</sup>  
Patricia I. Overhulser, MD<sup>++</sup>  
Dean A. Atkinson, MD<sup>\*o</sup>  
Richard T. Hatch, MD<sup>++</sup>

#### Senior Consultants:

Robert S. Ellis, MD<sup>\*o</sup>  
Lyle W. Burroughs, MD<sup>++</sup>

- \* Diplomate American Board of  
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- + Diplomate American Board of  
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John R. Bazalis, MD\*°      Dean A. Atkinson, MD\*°  
Warren V. Filley, MD\*°      Richard T. Hatch, MD\*+  
Senior Consultants: Robert S. Ellis, MD\*° and Lyle W. Burroughs, MD\*+

\* Diplomate American Board of Allergy and Immunology  
+ Diplomate American Board of Internal Medicine  
° Diplomate American Board of Pediatrics  
Central Office:  
750 NE 13th St. in Oklohomo City  
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P.O. Box 26827  
OKC 73126 (405) 235-0040

|                                      |  |  |                                     |
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|--------------------------------------|--|--|-------------------------------------|

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the conclusions directly supported by these findings.

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# ALLIANCE



**Susan Paddack speaks at the House of Delegates' meeting.**



**Sylvia Shirley presents the AMA Foundation check to Harold Brooks, MD, Dean-OU College of Medicine, Tulsa.**

**The Oklahoma State Medical Association Alliance held its 1999 Annual Meeting April 16th & 17th at the Tulsa Southern Hills Marriott.**



**Diane Cooke, outgoing 1998-99 OSMA Alliance President passes the reins to incoming 1999-2000 President Cheryl Baker.**

**Susan Paddack of Ada, currently the AMA Alliance Secretary and nominated AMA Alliance President-Elect, and Merrell Rogers, President-Elect of the Southern Medical Association Auxiliary, were guests and featured speakers at the House of Delegates on Saturday.**



**OSMA Alliance Past Presidents' Breakfast attendees**



**State and County Alliance Presidents' and Presidents-Elect's Breakfast attendees**

# THE LAST WORD

JUN 11 1999

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## Fund Established to Aid Tornado Relief Effort

In the aftermath of the tornadoes that hit central Oklahoma on May 3, the OSMA has established a restricted fund under its Education and Research Foundation. The Foundation is a 501(c3) non-profit, tax-exempt organization capable of receiving tax deductible donations that will be earmarked specifically for disaster relief efforts. Checks made payable to the "OSMA Foundation" can be sent to the OSMA at 601 W. 1-44 Service Road, Oklahoma City, OK 73118, Attn: Disaster Relief.

Any OSMA members affected by the tornadoes who wish to be considered for assistance or those who know of medical-related needs that might be met from this fund should contact Brenda Hays, OSMA Director of Communications, at 405/843-9571.

## AMA Website Keeps Members "In the Know"

The *AMA in Washington* section on the AMA's Internet site contains a great deal of timely information about what is happening in Washington and also provides physicians with information about AMA testimony and communications with Congress and the Administration. The home page of the AMA can be found at <http://www.ama-assn.org>.

An important component of the AMA's Website is the Grassroots Action Center, which can be found at <http://congress.nw.dc.us/ama/>. Among the features offered at this location are real-time AMA Legislative Alerts/Updates as well as the opportunity to sign up for weekly e-mail bulletins. Members can also send messages directly to their elected officials via e-mail and, if needed, find out who their senators and representatives are merely by entering their zip code.

In addition to the AMA's Website, physicians can call their elected officials toll-free through the AMA's Grassroots Hotline at 1-800-833-6354. In order to access the Hotline, members must provide their Medical Education (ME) number, which can be found on the mailing label of the weekly publication *American Medical News*.

For additional information about the AMA's Legislative Grassroots efforts, contact Kathy Musson, OSMA Director of Governmental Affairs, at 800/522-9452 or 405/843-9571.

## Thank You!

Many OSMA members, residents, and medical students called to volunteer their services for tornado victims. From Tulsa to Ardmore and throughout the rest of the state, the physician community once again responded to the needs of their fellow Oklahomans. A more comprehensive report will be presented in subsequent issues of the *Journal*, since initial assessments and recovery efforts were just being undertaken at press time.

## CME Credit Now Available from Home or Office

The Irwin Brown Office of CME at the University of Oklahoma Health Sciences Center now offers physicians the opportunity to receive CME Category 1 credits from their homes or offices. Recently added to this service are the January, February, March, and April issues of THE VECTOR, a pediatrics infectious disease monthly newsletter, and new issues will be added monthly through December 1999. Each issue is worth one CME Category 1 credit. In addition, back issues of THE VECTOR from July through December 1998 are also available. The OUHSC CME home page will also add "Medical Ethics" and other new programs as they too become available.

To access the CME home page, go to <http://research.ouhsc.edu/cme/homepage.htm> and click on "CME." The CME office is also looking for one-to-two-hour CME programs that are appropriate for offering through this medium. For more information, contact Jim Romero at 405/271-2350.

## Board of Trustees Meeting Schedule

Sunday, August 29, 1999  
Tulsa, Health Sciences Center

Sunday, November 14, 1999  
Oklahoma City, OSMA Headquarters

Sunday, February 6, 2000  
Oklahoma City, OSMA Headquarters

Thursday, May 4, 2000  
Oklahoma City, Westin Hotel

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# JOURNAL

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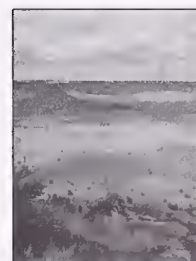
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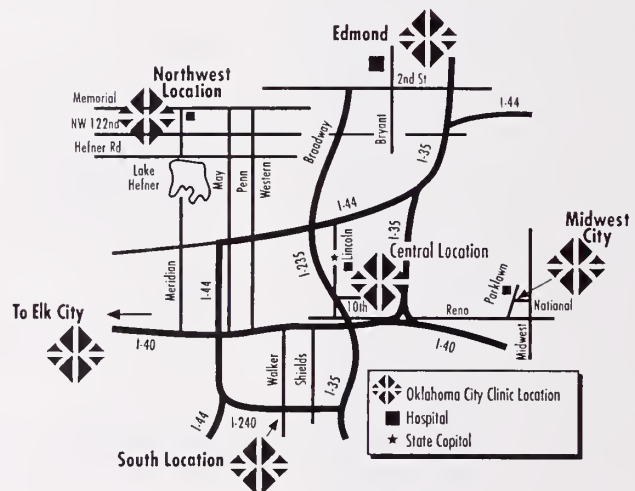
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## Why Organized Medicine?

I often worry about the role of organized medicine in the 20th century. As one looks to the history of "the house of medicine," it is evident that the progress that medical associations have made has been as a "reactionary movement" to change. As Medicare legislation was designed in the 1960s, organized medicine wailed that medical care, as they had known it, would be falling by the wayside. They stated that this was a slippery slope, from which our profession would never recover. This would cause medicine to lose that advantage and majesty that it had achieved in the golden years of medicine.

Is this the role that organized medicine strives toward?

There are those who take the stance that "watch-care," provided by organized medicine, has buffered the rapid changes that confront medicine in the 21st century. It is because of their diligence that a catastrophe has been averted or changed into controlled anguish. Organized medicine takes a great deal of pride in this role of "buffer."

Is this enough, is this the destined position for our organization?

Annual meetings come and annual meetings go. I have found my ability to tolerate these gatherings to be a bit wanting. You will be reading in this issue of the *Journal* the minutes and notes from the annual meeting of the OSMA. Embedded in these proceedings is a vast array of issues that were addressed during the recent meeting in Tulsa. Each issue was dealt with in a democratic, time honored, "Roberts Ruled" process. The gamesmanship has been well-orchestrated. The process is seen as "honorable" and appropriate.

But what of the innovation and vision?

I am concerned that the proceedings of this meeting are not dissimilar to the proceedings of the meeting in 1998 or 1997 or 1987. It might be interesting to look back and do a head-to-head comparison of the proceedings. Would we really find that the difference in time has changed and improved our organizational position? I am not interested in tearing down the process. I am interested in commenting on the content. This organization can continue its previous style of "standing firm" against change, or we can encourage a process of managing change and advocating innovation and vision for the political and social issues that affect patient care.

Is organized medicine relegated to the position of reacting to the changes in the world around us, or can we be proactive in this matter?

From an intellectual position, it is much easier to "react" and much more difficult to plan, produce or design. Are we predestined to take the intellectual easy road? Will we always be dependent upon others to design something that we must respond to, or tear down? From a motivation perspective,

it is much easier to entice or encourage members to react than it is to sit down, plan and think through a problem or need. When was the last time that you received a fax to ask for your ideas on how to design an alternative to Medicaid or cost-effective approaches to poly-pharmacy in the elderly?

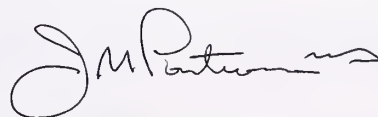
Isn't that the purpose of a profession?

There are some of us that hold on to the perspective that innovation and vision have a role in the continuation of organized medicine. The past "reactionary" approach is not working for the current generation of physicians. They express frustration with the style and content. Membership is down, the bulk of the heads at the annual meeting are gray or balding. The impact and reputation of organized medicine is waning. As an organization, this trend is not sustainable. As an organization, do we have the skills necessary to be agents of change or are we only able to "react" negatively to change?

Where is the vision?

In reality there are legions of requirements on a physician's time. There continues to be all of those daily distracters. *My county medical society meeting is at an inopportune time. The kids have baseball and soccer. I was up all night with phone calls. I have never really seen "eye-to-eye" with the folks who go to those meetings. I don't like the food.* The excuses are myriad, but the need is great. It may be time to get back into the groove, or even begin your groove, by seeking out opportunities of service in the "House of Medicine." If the apparent vision of the organization is not your vision, then it will require articulation on your part, starting at the "grassroots" and plodding your way through the organization. The test of time has allowed innovative ideas and visions to survive.

Is it time to rethink your approach?



J. Michael Pontious, MD  
Editor-in-Chief

**"Where there  
is no vision,  
the people  
perish."**

**— Proverbs  
29:18**

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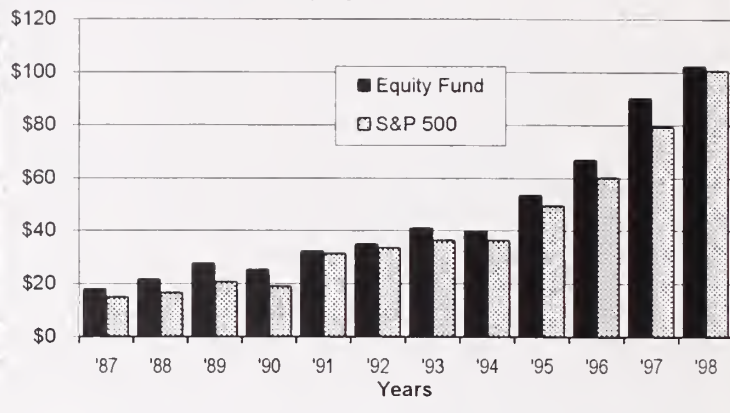
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# PRESIDENT'S PAGE

## Success at the Capitol

This is an excellent time to talk to you about OSMA's legislative activities and our Long-Range Plan (goal #3) — to *"increase participation in legislative and regulatory processes."* Recent successes at the capitol are due to the efforts of you who have communicated with your legislators, contributed to OMPAC and otherwise participated in the legislative process.



**The Peer Review Bill** — After a lot of work by OSMA through the Coalition for Quality Care, we successfully came to a compromise with the trial lawyers. In short, the final bill that has now been passed and signed by the Governor will preserve the right of physicians to engage in peer review discussion in their hospitals without fear that the minutes of those discussions will end up in court.

**The Mental Health Parity Bill** was also passed and *this time* signed by our Governor. Those businesses with more than 50 employees will be required to offer insurance coverage for six biologically-based mental illnesses (schizophrenia, manic depression, panic disorder, major depression, obsessive compulsive disorder and schizoaffective disorder).

**The Trauma Bill** has passed. This will help in setting up a Level One Trauma Center and will help reimburse our hospitals for "uninsured" trauma care.

Staff and members of the Governmental Activities Council recently visited with our legislators in Washington, DC. Rep. Coburn is sponsoring two bills on patient rights and access to care. The Council is working with Dr. Coburn and the AMA to

try to come up with bills that will be satisfactory to all. We are also promoting some form of the Campbell Antitrust Bill. We will keep you posted on these.

At present, OSMA is working with the Tobacco Free Oklahoma Coalition to try and assure that much of the funds received by the state as a result of lawsuits against the tobacco companies will be used for smoking prevention programs and treatment of tobacco-related illnesses. We have met with the Governor about this. We all need to continue to talk with our legislators about this and to talk with our patients regarding our need for their support.

We are making headway — our involvement at the legislature is improving. We need to thank our Council on State Legislation, our Governmental Activity Council and our lobbyists. We need to continue our financial support of our legislators, both individually and through OMPAC. We need to continue the grass-roots efforts on the part of each physician to talk with his or her legislator about medically related legislation.

Doctors all over the country are telling organized medicine that they want legislative efforts to be a top priority.

If we continue to improve our efforts to learn how to be positively involved in the legislative process, we can continue to make a difference. We can influence the outcome of those medical/political battles in ways that will benefit the members of our association, and, more importantly, will be a benefit to our patients.

A handwritten signature in dark ink that reads "Boyd O. Whitlock MD." The signature is written in a cursive, flowing style.

Boyd O. Whitlock, MD  
OSMA President

---

"We are  
making  
headway —  
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at the  
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## Posttraumatic Stress Disorder in Children: Implications for Assessment, Prevention, and Referral in Primary Care

Betty Pfefferbaum, MD, JD; Shajitha Nawaz, MD; Lauri J. Kearns, MD

Posttraumatic Stress Disorder (PTSD) has been described in children exposed to a variety of traumatic experiences. It is relatively common and is often accompanied by comorbid conditions. A number of factors influence the development of symptoms including those related to the traumatic event, the individual child, the family, and the sociocultural environment. Primary care physicians should routinely assess trauma exposure and response in the children they treat.

### Introduction

Children in our society are often exposed to trauma, and there is a developing literature describing their responses. Posttraumatic stress disorder (PTSD) is the condition most closely associated with trauma. Characteristic symptoms of the disorder may obscure the diagnosis keeping children and their parents from revealing their distress. Because primary care providers are likely to see traumatized children in their practices, it is essential that they familiarize themselves with the events and symptoms associated with posttraumatic stress and with preventive measures. This report reviews the presentation and course of PTSD in children, comorbid conditions, and associated factors. It identifies the appropriate role of the primary care physician in routine assessment of exposure and symptoms, in referral, and in prevention.

### Exposure

Exposure to traumatic events and situations is increasingly common, especially in some communities. The estimated lifetime prevalence of PTSD in the general population ranges from 1 to 14 percent.<sup>1-3</sup> Giaconia and colleagues<sup>4</sup> found that by the age of 18 years, more than two-fifths

of youths in a community sample met criteria for at least one DSM-III-R trauma and over 6 percent met criteria for a lifetime diagnosis of PTSD. Therefore, it is crucial that the primary care physician routinely inquire about exposure to traumatic stressors and symptoms.

### The Traumatic Event

A broad range of experiences, both natural and manmade, traumatize children. Naturally occurring stressors range from tornadoes and earthquakes to medical illnesses. Manmade events include accidents, abuse, murder, community violence, terrorism, and war. While primary care physicians recognize the need to assess posttraumatic symptoms following a natural disaster or a major manmade disaster such as the Oklahoma City bombing, the need for evaluation of posttraumatic stress may be less obvious in medically ill children or in those who witness community violence.

Characteristics of the traumatic event are important predictors of the child's response. For example, a community-wide disaster may prompt an outpouring of support not found when events affect only a few or when victims are dispersed over wide geographic areas. On the other hand, community-wide disasters may deplete available resources and thereby deter recovery.<sup>5</sup>

In general, trauma response correlates with exposure, measured by both physical and emotional proximity.<sup>1,6-9</sup> Physical proximity includes factors associated with physical distance from the event—seeing, hearing, smelling, or feeling it. Emotional proximity is measured by features of the event that create emotional involvement such as the injury or death of a loved one. A near-miss phenomenon has been described<sup>10</sup> but does not always predict symptoms.<sup>7</sup>

Direct correspondence to: Betty Pfefferbaum, MD, JD, 920 Stanton L. Young Boulevard, WP-3470, Oklahoma City, OK 73104-5020.

Exposure to secondary adversities such as displacement or relocation or economic ramifications like property loss or parental unemployment may contribute to the trauma response.<sup>11,12</sup> Intense or prolonged exposure to descriptions and images of trauma through media coverage may also contribute to symptom development.<sup>12-15</sup>

### Clinical Presentation

The essential features of PTSD are the development of characteristic symptoms following a traumatic event causing intense fear, horror, helplessness, or disorganized or agitated behavior. These symptoms involve three clusters: persistent re-experiencing of the stressor, persistent avoidance of reminders of the traumatic event and numbing of general responsiveness, and persistent symptoms of hyperarousal. Symptoms must endure for more than one month and must cause clinically significant distress or functional impairment. Children may develop psychosomatic symptoms and omen formation, the belief that they are able to foresee the future.<sup>1</sup>

Re-experiencing of the traumatic event may be evident in dreams, play, behavioral reenactment, and visualization.<sup>16</sup> According to Terr,<sup>16</sup> repetition is "the best indicator" of childhood trauma. In young children, repetitive play that incorporates some aspect of the trauma is common. For example, sexually abused children engage in sexualized play and child disaster victims play games of rescue. One 4-year-old began to masturbate with toys and to involve her peers in genital touching and manipulation after seeing her biological mother in court — the mother who had prostituted the child to obtain money for drugs. Reenactment may be expressed as passivity, recreating the helplessness experienced during exposure to the trauma. In some cases, the child identifies with the aggressor and victimizes others.<sup>17</sup>

Re-experiencing is particularly distressing if accompanied by symptoms of arousal. The physiologic response to threat—the "fight or flight" response—involves the sympathetic nervous system. Heightened arousal may also occur in response to reminders of the threat and to new threats. Over time, a repeatedly traumatized child may develop tachycardia, hypertension, anxiety, sleep disturbance, hyperactivity, and impulsive behavior.<sup>18</sup>

Avoidance involves symptoms such as repression, denial, and numbing. Terr notes that children exposed to a single incident of trauma do not use denial. When exposed to extreme, repeated, or longstanding trauma, however, denial, numbing,

and memory blocks may develop, and some children even induce self-hypnosis.<sup>16</sup> Dissociative responses may also occur through mechanisms like daydreaming and fantasy.<sup>18</sup> The 4-year-old sexually abused child was observed in dissociative states. When redirected, she would stop and "freeze" in position, staring ahead and appearing not to hear what was said to her. She would resume normal interactions within minutes. Personality changes may occur overtime. Some children become withdrawn and detached; others unable to establish or maintain healthy relationships develop a seductive quality with an indiscriminate style of interacting in which all people are treated in the same superficial, manipulative style.<sup>16</sup>

While avoidance provides a break in the sometimes horrifying symptoms of intrusion, it can also create perplexing problems preventing victims from seeking or complying with treatment. For example, we found many families to avoid treatment after the 1995 Oklahoma City bombing.<sup>19</sup> A 15-year-old who had been seduced by an older boy and then raped by him and two of his friends at the age of 11 years was in treatment for depression for 18 months before confiding to her therapist what had occurred. Once addressed, she was able to work through the trauma though still at times bothered by the intrusive remembrances of it.

### Disease Course

Symptoms usually begin within three months following exposure to a traumatic event, but they may be delayed for months or even years.<sup>1</sup> The aftermath of trauma often brings exposure to other adversities such as property loss, displacement, and parental unemployment. Some stressors engender intense support initially, which may dissipate as external attention decreases. Traumatic reminders rekindle symptoms upon exposure to something reminiscent of the event. Studies demonstrate improvement over time for many,<sup>7,20,21</sup> but for others, symptoms endure and may even increase.<sup>21-23</sup> Recovery occurs within three months in approximately one-half of cases,<sup>1</sup> but stress responses can endure and potentially affect future development.

### Comorbidity and Associated Symptoms

Comorbid conditions are common with PTSD, especially anxiety, affective disorders, and alcohol and substance abuse.<sup>2,3,24</sup> Symptoms commonly associated with PTSD include fear, grief and loss, dissociative symptoms, regression, guilt and shame, somatic complaints, interper-

sonal problems, behavior problems, personality changes, substance use, and academic problems.<sup>1,4,22,25,26</sup> On the other hand, exposure to trauma may lead to constrained or improved behavior in some, at least initially<sup>15,23</sup> and it does not necessarily result in academic decline.<sup>27,28</sup>

### **Partial Symptomatology**

Children may suffer partial symptomatology which may be disabling<sup>4,29,30</sup> and, in some, the full symptom complex develops late. Therefore, it is important to assess for symptoms in all three clusters and to consider intervening even when full criteria are not met. This is particularly important in children since PTSD often has a chronic course that may disrupt development and adaptation.

### **Who is at Risk?**

#### ***Child Factors***

Individual characteristics of the child such as gender, age, preexisting psychiatric conditions, and prior trauma influence the development of symptoms. Gender influences the child's defensive style and coping, the availability and use of social supports, and expectations of response and recovery. Gender differences among children in studies with large samples generally find girls more symptomatic than boys,<sup>4,26,29,31,32</sup> though in a recent review of 25 studies, Foy and colleagues<sup>33</sup> reported inconsistencies in the relationship between PTSD and gender.

Age and developmental level influence the child's exposure to risk, understanding of the trauma, quality of response, susceptibility to parental distress, coping style and skills, and memory of the event.<sup>34-39</sup> Furthermore, the trauma and the child's response to it may influence the child's adaptation and his or her subsequent cognitive development, social maturation, personality style, self-concept and self-esteem, and impulse control.<sup>8</sup>

PTSD symptoms have been documented in children of all ages. Despite difficulties in assessing PTSD in young children, a number of investigators have demonstrated that even preschoolers are affected by trauma and that they evidence symptoms of PTSD and other problem behaviors in response to stress.<sup>11,40-45</sup> For example, Saylor and colleagues<sup>44</sup> and Sullivan and colleagues<sup>45</sup> described responses such as clinging, frustration, irritability, whining, temper tantrums, and sleep disturbance in preschoolers after exposure to Hurricane Hugo. Children incorporated their traumatic experiences into their conversations, play, and draw-

ings; and they personified the storm in their conversations and play.<sup>44</sup>

Few studies of PTSD in children examine previous trauma, prior conditions, or psychiatric history, though preexisting conditions and prior exposure increase the vulnerability of children at times of stress.<sup>33,46-48</sup> Prior traumatic experiences are likely to predispose one to future stress responses and to be triggered by newly occurring stressors.<sup>8,9</sup> Therefore, it is important for the primary care physician to inquire about a history of emotional problems and previous exposure to trauma and to be especially alert for symptoms in those with a past history.

#### ***Family Influences***

A number of studies document concordant responses in children and parents exposed to the same trauma<sup>6,11,45,49-52</sup> though not all studies agree.<sup>27,35,53</sup> While this concordance may reflect similar exposure, it may also represent a contagious phenomenon as children and their parents respond to each other's stress. Rosenheck and Nathan<sup>54</sup> describe the development of PTSD symptoms in the young son of a war veteran. Perry and colleagues<sup>18</sup> suggest a possible mechanism for this process, attributing "vicarious traumatization" to persistent unchecked hyperarousal in which the parent's response becomes a source of trauma to the child. In such situations, of course, the parent is also less able to provide needed support to the child, compounding the problem. Terr<sup>28</sup> described a similar process in siblings. She found posttraumatic play in the younger sibling of a trauma victim that was then passed on to yet another sibling and speculated that the anxiety associated with the traumatic play attracted the nontraumatized child into the play.

For the most part, family relationships are protective for children,<sup>55,56</sup> but a host of family issues may influence symptom development. McFarlane<sup>51</sup> found that separation from parents immediately after a natural disaster, ongoing maternal preoccupation with the event, and altered family functioning were more predictive of symptom development in children following disaster than were exposure or loss. Therefore, the primary care physician must examine family functioning and be alert to the potential spread of stress symptoms.

#### ***Social Influences***

Community characteristics can also represent a source of trauma. Studies have documented high levels of exposure to violence and victim-

ization especially in certain populations such as inner city<sup>57</sup> and minority<sup>58-60</sup> youths. Several recent reports have also documented stress responses in youths residing in communities characterized by crime and violence.<sup>59,61,62</sup> The effects of living in highly stressful environments may be cumulative as noted by Horowitz and colleagues<sup>61</sup> who coined the term "compounded community trauma" in reference to the effects of chronic and repeated exposure to "endogenous" violence. Children residing in these communities warrant careful evaluation at every encounter with the health care system.

### Assessment

Children may not spontaneously report their symptoms and avoidance can conceal the presence of PTSD unless systematically assessed. In certain situations, such as disasters or reported criminal victimization, exposure to trauma is obvious, and the clinician quite naturally inquires about the signs and symptoms of PTSD. In other situations, however, exposure is obscure. The prevalence of violence and other stress-inducing situations is so great that clinicians should routinely assess exposure and symptoms in all youths.

Assessment of trauma involves the traditional methods of evaluation including obtaining a history of exposure, prior trauma, observation, the use of projective techniques such as play and artwork, and formal psychological testing, if indicated. When possible, it is helpful to obtain objective information about the traumatic event prior to evaluating the child. Any concern about a child's response should trigger referral to a mental health professional.

### Screening

Screening instruments are useful in clinical work especially when groups of people are affected by a trauma such as in community disasters. Rating scales can be used to identify those at greatest risk and to facilitate the triage process. Documentation of the clinical response is also useful in planning service delivery and preparing funding requests in disaster situations.

Appropriate instruments used in assessing trauma typically measure exposure, both physical and emotional; personal consequences; immediate emotional response and physiological symptoms; current PTSD symptoms; and other related emotional responses such as fear, anxiety, depression, and grief. Screening instruments may be self-report or may be designed for completion by parents, teachers, clinicians, or

other observers.

Rating scales are inexpensive, take little time to complete, and require minimal clinician supervision. They also have disadvantages. They may trigger emotional distress, introduce rater bias, and foster concern that the child's symptoms are less important than data collection. Furthermore, a number of studies have demonstrated that parents<sup>27,35,53</sup> do not accurately estimate the distress responses of their children, though not all studies evidence this discrepancy.<sup>6</sup> Parent-child discrepancy may represent denial on the part of parents, but children may be compliant during traumatic events and may not fully display their distress.<sup>23</sup>

### The Initial Interview and Projective Assessments

Individual work begins with a sensitive clinical interview. The desire to avoid reminders of the trauma commonly dampens the child's verbal expression. Simple projective assessments such as play, drawing, and storytelling are useful especially with nonverbal children who may readily express their distress through repetitive reenactment and revealing and graphic depictions.

Dlugokinski and colleagues<sup>63</sup> have developed a group interview technique to assess the need for individual evaluation and to begin the process of healing in traumatic situations involving large numbers of children. The interview can be conducted in the classroom or with other small groups. It proceeds through a series of questions addressing cognitive and emotional responses to the stressor, coping strategies, and current adaptation. It concludes by providing validation of feelings and education about coping. The effectiveness of the interview with highly exposed children has not been systematically examined.

In the immediate aftermath of trauma, it is often helpful for victims to discuss their experiences, clarify and validate what has occurred, describe their emotional responses, and recognize that others have survived similar experiences. Professional contact should focus on the traumatic event and should encourage normalcy.<sup>64</sup>

### Referral

The primary care physician can educate children and their families about trauma and stress responses and the role of traumatic reminders. In fact, information about the effects of trauma and the course of recovery is an important aspect of treatment. Reassurance that their symptoms are consistent with the usual post-

trauma course can be comforting to children and their parents. It is especially important that they understand the avoidance symptoms which can be used to promote recovery such as by purposeful avoidance of traumatic reminders but which can also prevent them from recognizing the need for treatment or from continuing it. This places the primary care physician, who is most likely to see the child and family after trauma, in a key position as one who can inquire about exposure and symptoms, make referrals, and follow the child's recovery.

Parents and those who work closely with children such as teachers, counselors, other school personnel, and primary care physicians should be taught to recognize and address symptoms of trauma and should be informed about the contagious features of the condition. It is important to identify children with stress responses quickly and to refer them to an experienced mental health professional as soon as possible because the child's initial response may predict longer-term effects.<sup>8,10,65,66</sup> It is also important to identify and treat posttrauma responses in parents since their reactions may influence that of their children.<sup>50,51</sup>

### Prevention

Prevention of PTSD involves either the prevention of the traumatic event causing the disorder or the recognition of symptoms soon enough to avert full manifestation of the disease. A number of factors complicate prevention. Trauma is ubiquitous and PTSD has no single etiology; some stressors are unpredictable and occur without warning; and the effects of trauma exposure are not always obvious or readily appreciated. Specific prevention measures in children involve limiting exposure to stressor events and situations. Health care professionals must educate parents and others about the effects of trauma and the importance of limiting exposure.

When trauma results from unpredictable but obvious singular events, such as a hurricane or terrorist act, fear and anxiety may prevail in an atmosphere of chaos and disorganization. Primary care physicians are commonly pressed into service during these situations and assume a key role in prevention. At the community or institutional level, prevention includes the preparation of a disaster plan, mechanisms to assure physical readiness, and the development of an organized mental health response. Prevention also involves efforts to minimize exposure and secondary adversities and to edu-

cate victims and potential victims about safety, symptoms that warrant intervention, and safeguards against emotional sequelae.

The primary care physician is likely to be one of a few individuals aware of less obvious trauma, such as the trauma associated with physical abuse or a chronic illness. It is possible and important to identify high-risk situations and to establish mechanisms for early detection and prompt intervention. These measures are often educational in nature and focus on the child, parent, school, and/or community. Disclosure of the traumatic event or events is an important initial component of prevention and early intervention. Indeed, failure to disclose the traumatic event may represent acquiescence to inappropriate behavior and relationships that may portend intransigent psychopathology.

A contagious quality to trauma symptoms has been described<sup>28,67</sup> and Pfefferbaum and Pfefferbaum<sup>67</sup> have addressed implications with respect to prevention. The overwhelming and unpredictable nature of many traumatic events leaves some victims highly impressionable, suggestible, and susceptible. Those working in situations involving large numbers of individuals at once, such as in natural disasters, war, or war-like conditions, must avoid describing scenarios of response to prevent influencing symptom development in vulnerable individuals. The clinician must be sensitive to the need to explore the trauma but must avoid retraumatizing the child.

Health care professionals should develop relationships with the local media and encourage responsible reporting, thereby diminishing indirect transmission of posttraumatic conditions. It is also possible to enlist the aid of the media in providing information about symptoms, factors that influence symptom development, and how and where to obtain professional help.

### Conclusions

Trauma occurs in response to natural events such as tornadoes and chronic illness and to man-made events such as accidents, abuse, and war. PTSD symptoms—re-experiencing, avoidance, and arousal—may ensue. Primary care physicians are uniquely situated to address this problem. The prevalence of violence and other stress-inducing situations underscores the need for routine assessment of exposure and symptoms in all youths. The primary care physician should incorporate questions about trauma exposure and response in the history taken from all children they see. □

## The Authors

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*"It is characteristic of experimental science that it opens ever-widening horizons to our vision."*

Louis Pasteur, 1822-1895

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## Do Not Resuscitate (DNR): Analysis of the DNR Act

Stacie Koehler, Raniyah Ramadan and Mike Salter

Due to advances in technology, physicians and patients are being faced with the issue of do not resuscitate (DNR). DNR is an order that determines whether or not cardiopulmonary resuscitation (CPR) should be administered to a critically ill person. Within the state of Oklahoma, the Oklahoma DNR act was created in order to establish regulations regarding the decision-making of when to use CPR. This Act gives rise to legal and ethical problems, which have been taken into consideration by the Oklahoma Association for Healthcare Ethics (OAHE). The following article focuses on DNR with examples of case histories and possible recommendations for improvement to the current law. Furthermore, this article sets out to show why the decision of whether or not to resuscitate should be made by the patient or their family.

### Introduction

Bioethics, which is the study of the ethics in the medical field, is one of the most controversial topics of this era. As technology continues to advance at an unprecedented rate, we find ourselves facing decisions that are more difficult than in the past. Thanks to the advances in medical technology, we now have options concerning "how" and "when" we die. At the moment of death, we can not only be resuscitated, but also be kept alive well beyond our natural expiration time.

As the "baby-boomers" reach retirement age, patients and families of patients are beginning to exercise more influence over decisions near the end of life. The issue of quality of life has now challenged all the traditional values of life conservation. Additionally new and controversial issues such as advance directives further complicate ethics regarding the end of life. This report will review the different types of advance direc-

tives and will emphasize questions about do-not-resuscitate orders (DNR).

Advance directives are proving to be a significant issue in medical ethics. This topic is controversial, and will pose more questions in the future. What exactly is an advance directive? "An advance directive for health care" means any writing executed in accordance with the requirements of section four of the Oklahoma Rights of the Terminally Ill or the Persistently Unconscious act and may include a living will, the appointment of a health care proxy, or both.<sup>1</sup> Advance directives tend to differ depending on the patient's condition at the time in question. For example, directives would differ from healthy patients to those with a terminal illness.

There are three types of advance directives in Oklahoma: living wills, durable power of attorney, and do-not-resuscitate orders. Living wills come into effect either in terminal cases, or cases in which the patient has six months or less to live. In a living will, one may state the type of treatment that they want to receive in certain situations, but does not include a surrogate to make decisions. A durable power of attorney (DPA) is similar to a living will, but it becomes active when one is unconscious or unable to make a medical decision. When executing a DPA, it is necessary that the patient have a friend or family member that the patient trusts to make decisions.

A DNR is an order issued by a licensed physician that cardiopulmonary resuscitation (CPR) should not be administered to that person.<sup>2</sup> CPR, as defined by the Oklahoma state law, is the measure used to restore or support cardiac or respiratory function in the event of cardiac or respiratory arrest.

"Modern CPR techniques were first introduced in the 1950s as a treatment for those who suffered a sudden and unexpected cardiac or res-

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piratory arrest. Where CPR was in time and was successful, it could restore the patients to normal life.<sup>73</sup> CPR soon became the standard for resuscitating all patients suffering arrests, including terminal patients, and patients whose chance of survival were very limited.

DNR orders evolved by necessity because of medically inappropriate situations. Some examples include terminal cases of metastatic cancer, patients on life support or having failing organs, or possibly the frail and elderly in which CPR could severely crush the chest. CPR is very expensive and can be extremely painful.

"As performed in hospital settings, CPR is usually unsuccessful. One estimate is that CPR is attempted on approximately one-third of the two million patient deaths that occur in American hospitals annually. Of patients who receive CPR, one-third survive the resuscitation effort, but only one-third of those who do, survived long enough to be discharged from the hospital. However, among the small percentages that survive until discharge, approximately 80 percent are still alive six months later, generally without severe impairment."<sup>74</sup> In some cases, CPR is only partially successful, and may leave the patient brain-damaged or otherwise impaired. The success of CPR depends on the overall medical condition of the individual.

Today, many patients that die in hospitals have a DNR order in place. Those who have strong feelings concerning a DNR order should initiate this directive early before becoming unable to make the decision.

### **Legislation and Policy in the Oklahoma DNR Act**

The Oklahoma DNR Act became effective in November of 1997. "A primary purpose of the DNR act is to recognize by statute a legally active means for implementing an individual's right to make advance decisions about the withholding of cardiopulmonary resuscitation in the event of cardiac or respiratory arrest in both hospital and non-hospital settings."<sup>75</sup> The act serves two purposes. First, it regulates the use of physician DNR orders. Second, the act provides for portability of DNR orders once legally written.

The Oklahoma DNR Act creates a basic structure that says all persons "shall be presumed to consent to administration of CPR." CPR is broadly defined here as "measures used to restore or support cardiac or respiratory function in the event of a cardiac or respiratory arrest."<sup>75</sup> There are six exceptions to the presumed consent:

1. notification of physician by a competent patient.
2. notification of physician by a minor's parent or guardian.
3. notification of physician by the patient's "representative"
4. when an incapacitated person has no representative, knowledge by physician of informed DNR decision made when patient had capacity
5. execution of a statutory DNR consent
6. execution of an advanced directive or other document recognized by the Oklahoma DNR Act

### **Rights of the Terminally Ill or Persistently Unconscious Act**

If the patient is unable to make his or her own decision regarding DNR, the decision may be made by a "representative." A representative is defined as 1.) Health care proxies under Oklahoma Rights of the Terminally Ill or Persistently Unconscious act, 2.) Attorney-in-fact under Durable Power of Attorney Guardianship and Conservatorship act.<sup>5</sup> These representatives make decisions about CPR using the standard of "known wishes of the incapacitated person."

The act is also aimed at regulating physician DNR orders. Physicians are implicitly restricted from writing a DNR order when a patient or his representative has made a valid request for CPR under the act. For the DNR order to be effective, it must be signed by the individual, or a representative and two adult witnesses. The Oklahoma DNR consent form is different than consent forms in most states because it may be executed by "any person" and there are no statutory limits placed on when it may be executed. Other states have limited circumstances on when it can be executed.

The law requires compliance by all healthcare providers when they are provided with the original or copy of the form whether they feel the DNR order is appropriate or not. Another part of the Act allows physicians to execute a certification on the back of the DNR consent form, certifying that he "knows, by clear and convincing evidence" that the patient would not have wanted CPR. The law also establishes that healthcare providers not be held legally liable for carrying out in good faith a DNR order or for administering CPR if the person reasonably and in good faith believes the order to be revoked.<sup>5</sup> The act goes on to say that if a physician refuses to comply, he must take reasonable steps to arrange for another physician to take over care of that patient.

The Oklahoma Association for Healthcare Ethics (OAHE) has outlined some problems they

see with the existing Oklahoma DNR law. The first problem is the legislative intent and general structure of the law. The act's content suggests a very broad purpose: "to protect people from inappropriate over-treatment by increasing the opportunities for people to exercise self determination regarding CPR."<sup>5</sup> They suggest the law increases opportunity for autonomy which may cause an increase in the use of CPR and decreased availability of DNR because people do not take advantage of it. The OAHE feels that the act ought to expand and clarify its broader intent and effect.<sup>5</sup>

Next, the OAHE believes that the act encourages and may require healthcare providers to act contrary to reasonable medical standards. There are several reasons they believe this to be true. First is the fact that physician DNR orders which conform to reasonable standards of medical practice, but which are not based on one of the statutory exceptions to the presumed consent may be unlawful. Second is that the act does not include family members within the statutory definition of representatives. Oklahoma is one of 13 states that does not explicitly permit surrogate decision-making by family members. Third, "the law allows physicians to act as proxy decision-makers when statutory representatives are unavailable, but stipulates they must base their decision on an unrealistically different standard." The OAHE feels these are unrealistically narrow legalistic restrictions.<sup>5</sup>

To remedy these problems the OAHE offers some suggestions: clarify statutory exceptions to the presumption in favor of routine CPR in all cases but not exclusive situations in which the presumption can be rebutted, include a provision in the act which states that nothing in the act will require actions that are contrary to reasonable medical standards, expanding list of statutory "representative," prioritize the decision-makers, giving preference to individuals named by the patient as healthcare proxy, and choosing some other standard for decision-making by the physician.<sup>5</sup>

The OAHE also feels that the DNR consent form is too broad. Since the Oklahoma statute places no limits on who may use a DNR consent form or when it may be executed, it is easily used in unintended circumstances. When the DNR consent form is executed it is legally binding even in the case of a healthy adult for whom CPR is medically appropriate. This can be a problem. For instance, imagine the dismay of the parents of an adult son (i.e. 18 or older) who has just attempted to commit suicide. They call 911 because the son has gone into cardiac arrest. To

their dismay, the EMT people will not obey their demands that CPR be given to their son. The EMT people refuse because of a completed DNR consent form found on the son's person. This is a case where CPR would have been medically appropriate for the individual but providing it would have subjected the EMT to legal liability.<sup>5</sup>

House Bill 1381 was recently passed by the 1999 State Legislature and signed by the governor. Amongst the provisions, the bill provides that "health care agencies shall maintain written policies and procedures with respect to do-not-resuscitate orders, do-not-resuscitate consent forms, and certifications of physician. Such written policies and procedures shall ensure the following rights to all persons under the care of health care agencies." In addition, it states that "a physician, health care provider, or health care agency to begin or continue the administration of cardiopulmonary resuscitation when, in reasonable medical judgement, it would not prevent the imminent death of the patient."

### Consent and Case Histories of DNR

Cardiopulmonary resuscitation is similar to other medical interventions with advantages and disadvantages, risks, and benefits. Initially, CPR was used for healthy persons who experienced cardiac or respiratory arrest during a medical procedure or as a result of drowning.<sup>6</sup> In time, health professionals have recognized that CPR might be administered to any individual who experiences cessation of cardiac or respiratory function. Today, CPR is a procedure that will be administered to all patients who experience cardiac arrest unless otherwise specified in the form of a DNR order.

During serious illness, patient preferences regarding life-sustaining treatments play an important role in medical decisions. When there is a possibility, the patient should let it be known to the hospital professionals whether they consent or refuse resuscitation. A patient's right to consent to or refuse resuscitation or other recommended medical care does not depend on the presence or absence of a terminal illness or the agreement of their physician. Professional guidelines for CPR reflect the idea that consent is possible and desirable, and that resuscitation is not always appropriate.<sup>7</sup> The Patient Self Determination act of 1990 requires health facilities receiving Medicare or Medicaid funds to give patients information regarding advance directives.<sup>7</sup> By offering this type of education to patients, patients will be educated enough to make a decision about resuscitation if needed. The California courts fully support

the rights of individuals to determine the course of their own health care:

"...If the right of the patient to self-determination as to his own medical treatment is to have any meaning at all, it must be paramount to the interest of the patient's hospital and doctors. The right of a competent adult patient to refuse medical treatment is a constitutionally guaranteed right which must not be abridged."<sup>7</sup>

One example of a do-not-resuscitate order case is one of a quadriplegic patient with pneumonia and possible respiratory failure. Despite his homebound lifestyle, he is fully awake and alert, and his life is not without value. He is able to communicate about his quality of life, and the likely scenarios should he have an arrest and need CPR. Therefore, in this situation the patient is able to make the final decision on whether he chooses DNR if he should go into arrest based on how he feels his quality of life will be after DNR.<sup>8</sup>

In another case history, an 81-year-old woman with recurrent colon cancer with liver metastases is admitted to the hospital for chemotherapy. In many outcome studies of CPR in the hospital, such patients have 0% survival and would be called "futile." When this patient was told of her prognosis and was approached for a DNR order, she requested to be resuscitated no matter what the outcome. In this case, even though resuscitation is considered futile, it should be up to this patient to decide for they have been educated in the result of the resuscitation, and they have chosen to live with the consequences.<sup>9</sup>

All in all, patient consent is the issue in the decision making of a DNR order. The above case studies show the ethical side of the DNR process. It is important for the patient be included in the decision along with the education and support of the medical staff in treating the patient.

## Recommendation

A potential improvement to the current law would be an amendment that would expand patient representation to include family members. In accordance with the recommendation of the OAHE, a new section should be added to incorporate into the DNR act the family surrogate hierarchy of decision-makers found in the present Oklahoma provision in dealing with persons without a decision-making capacity into research projects involving human subjects. 63 O.S. §3102A (Supp. 1997)

The list of family decision-makers would be:

1. The spouse, unless the patient has no spouse, or is separated, or the spouse is

physically or mentally incapable of giving consent, or the spouse's location is unknown or the spouse is overseas, or the spouse is otherwise not available;

2. An adult son or daughter;
3. Either parent;
4. An adult brother or sister; or
5. A relative by blood or marriage.

This list should be preceded by decision-makers specifically identified by the individual to make such decisions, such as the individual's guardian, attorney-in-fact named in a durable power of attorney, or a health care proxy named an Advance Directive for Health Care. This eliminates the concern of those who do not trust their family members. They simply must name someone they trust to be their health care proxy and the concern is resolved.<sup>5</sup>

## Conclusion

We believe that it is the patient's right to decide whether resuscitation is desired in the event of an arrest. In cases where the patient is unable to decide for himself or herself then the decision should be placed upon their family. There is a substantial amount of money being wasted on unnecessary and many times unwanted resuscitation procedures in which the end result is a poor quality of life and increased medical expense. It is imperative that people be aware of their individual right to a DNR order. To achieve this objective, people need to be educated as to their rights. The aforementioned Act is a good beginning; however, its aims are broad and must be revised in order to clarify and decrease ambiguity. □

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# 1999 ANNUAL MEETING PROCEEDINGS

## REPORT OF THE PRESIDENT

Opening Session, OSMA House of Delegates

By Mary Anne McCaffree, MD

Life is about change, and your OSMA celebrates a year of change and growth. It has been an honor to serve as your president, and it is a pleasure to detail the events of this year. Your generosity and kindness have been outdistanced by your compassion and energy in providing the best care for your patients, the citizens of Oklahoma. This is evident by your response to the member survey. In a survey completed by nearly a thousand members, the question of volunteerism and charity was answered. Eighty-five percent of you volunteer in your community and provide additional medical care beyond your own office. You are to be congratulated and recognized as important heroes in this state.



The issues of patient quality and the process of hospital quality assurance rose as the first and formidable issues of the year. Peer review has been the topic of several membership letters, the President's page, and a discussion for the county medical meetings throughout the year. A successful coalition was developed with the OSMA and the generous support of PLICO, the Oklahoma Hospital Association, and the Oklahoma Osteopathic Association, resulting in the development of the Coalition for Quality Patient Care and House Bill 1443. Dr. David Russell, Executive Director Brian Foy, Director of Governmental Affairs Kathy Musson and Lobbyist Lynne White have attended countless meetings. Many of you rallied around this issue on Medicine Day at the Capitol, and your voices have been heard. A conference between members of the coalition and the lawyers is in the process of developing language for a successful outcome for this issue. Some members have become involved with the county and state Associations because of this topic. Many of you have responded to a specific need voiced by your leadership. This effort demonstrates our strength. Your patients will benefit from these efforts. Thank you.

Your OSMA completed the law firm search chaired by Dr. David Selby and selected Linda Scoggins from Hartzog, Conger & Cason who has been actively involved in working with the Association. She has developed the Limited Liability Company for your Oklahoma Centralized Verification Organization (OCVO), consulted on the Association's resolutions and bylaws, and provided legal expertise regarding OSMA matters. We welcome her to our team.

The OCVO, directed by Michele Seba, has become the newest member of the OSMA family. Now a Limited Liability Company, this organization has continued to grow, providing a credentialing service using a single, uniform form, for more than 8,000 members. This statewide service is located in Tulsa. Your PLICO supported

this transition with a generous grant. The transition team, chaired by Dr. Chris Carey, actively met over the past 12 months. Together with board members, Drs. Barbara Hastings, Rosemary Bellino, Kurt Frantz, Gary Paddock, Frank Phelps, Executive Director Brian Foy, and your president, the organization has made a successful change while maintaining its high rating with the National Center for Quality Assurance.

A historic step was made for the OSMA when osteopathic physicians joined the Association beginning January 1, 1999. Appropriate changes in the bylaws for each county organization were facilitated by the work of Dr. Bruce Storms, Speaker of the House. These new members are welcomed.

These areas of growth have developed with the vision of Executive Director Brian Foy, Associate Executive Director Kathy Musson, and the addition of Marisa New, Brenda Hays, and the support of the entire OSMA staff. Barbara Matthews now directs meeting services and the AMA delegation members with the able assistance of Michele Smith. Marilyn Fick provides support for the executive committee, board, the executive director, and the Alliance, and Shirley Burnett, comptroller, provides the financial information. Office Manager Judy Lake is also responsible for OMPAC support while Sue Graves assists with the Councils on Medical Services and Public and Mental Health. Lydia Shirley works with Kathy Musson, Lynne White, and Jason Ziesch on legislative issues and the Doctor of the Day program. Kaye Boroughs is membership coordinator, Rhonda Matthews provides support for the Council on Professional and Public Relations, and Sherry Burrows and Heather Begay are the friendly voices that are heard on the telephone.

The OSMA delegation, together with other AMA delegates, passed a strong resolution about the onerous Evaluation & Management guidelines recommended by HCFA, providing the support for delaying their implementation indefinitely. Recall last year, when the E&M guidelines issues were the priority for our members. In addition, your OSMA leadership, together with the other unified states of Mississippi, Illinois, and Delaware, successfully negotiated a pilot project to participate in a rebate on your 1999 AMA dues. The total dues reduction of approximately 20 percent was realized due to the negotiations of the Oklahoma Delegation leadership. Remittance of the dues reduction will be mailed to each OSMA member in April. Negotiations are being developed to provide greater membership benefits to the unified states for 2000.

Your AMA delegation continues to represent Oklahomans, and its members have been critical in defining the issues. For example, last year's resolution defining "medical necessity," authored by Dr. Perry Lambird, has become the cornerstone of the AMA's position.

The Organized Medical Staff Section, led by Dr Bill Coleman, continues to support a uniform application form for physician credentials. Along with these activities, other Oklahoma physicians are also assuming greater leadership roles at the national level. Dr. Jay Gregory was nominated and is running for a position on the AMA Board of Trustees, and your president has been appointed to serve on the AMA Commission on Unity (the Ad Hoc Committee on the Federation).

Federal legislation issues were discussed with your OSMA leadership and AMA Washington staffers Richard Deem and Terry Carr. Dr. Richard Boatsman led the discussion regarding end of life care and medication for pain relief for terminal patients. Scheduling this discussion to coincide with the Council on Long-Range Planning facilitated meeting attendance.

Your OSMA is represented by your president on the newly constituted Oklahoma Health Care Information Advisory Committee, a 35-member organization established by the legislature to develop the information for public and private use derived from hospital admissions. The web site is: <http://www.health.state.ok.us/program/hci/index.html>.

The Councils and Committees have actively pursued a health improvement initiative. Volunteer physicians have spent time and effort to develop these plans on behalf of the OSMA. One example of this contribution is the amount of time and effort spent by the members of the Council on State Legislation and Regulation, chaired by Dr. Ed Brandt and staffed by Associate Executive Director Kathy Musson, Legislative Assistant Lydia Shirley, and Lynne White, lobbyist. This 36-member group has met biweekly since January 12, 1999, for a total of 12 meetings and an average discussion time of four hours per meeting. The average attendance at each meeting was 30 members. Given an "allowance" of \$100 per hour for each Council member, this results in \$144,000 of "donated time" (\$100 x 4 hours x 30 members x 12 meetings) for this Council. The efforts of these and other council members reflect the generosity of those who volunteer to serve. Your OSMA recognizes the important contributions of these generous members. The Peer Review bill (HB 1443), Genetic Research Nondisclosure Act (HB 1368), Oklahoma Do-Not-Resuscitate Act (HB 1381), and Trauma Care Assistance Revolving Fund (SB 290) were initiated by the OSMA. Bills that were initiated or supported by OSMA and the Oklahoma Hospital Association include the following: HB 1486, the SoonerCare Task Force; HB 1158, The Emergency Medical Services and Care Systems Act; SB 439, OSEEGIB; and HB 1588, OSEEGIB, a bill to prohibit rate changes. Bills strongly supported by OSMA include: SB 2 (Mental Health Parity); HB 1826 (Oklahoma Managed Care External Review Act); HB 1318 (Health Care Freedom of Choice Act, with specific provisions); HB 1767 (Telemedicine); HB 1188 (Ambulatory Surgery Centers); and HB 1189 (Medical Practice Act Amendments).

The Councils and Committees have been active during the year, as detailed in their reports. The Long-Range Planning Council met twice, revising the plan and setting priorities and budgetary items. David Selby, MD, is commended for his strong leadership in that area.

The Council on Public and Mental Health, chaired by Dr. Robert Mahaffey, developed a comprehensive plan to address the *State of the State's Health*, including the "Physicians' Campaign for a Healthier Oklahoma," chaired by Dr. Robert Weedn with Dr. Sara DePersio serving as Vice Chair. Members of that task force are Drs. Gordon Deckert, George Prothro, Gary Strebel, Hal Vorse, Kent King, Ed Brandt, David Nierenberg, John Leatherman, and your president, as well as the current and future Alliance Presidents Diane Cooke and Cheryl Baker. Prevention of Tobacco Use in Women and Girls is one

group that has been involved in developing this plan. The Children First Program, supported by the Oklahoma State Department of Health, as well as the Schools for Healthy Lifestyles, sponsored by the Oklahoma County Medical Association, are two other initiatives involved in this effort. Three counties have received funding from the Robert Wood Johnson Foundation for health improvement initiatives. The Turning Point program has targeted Tulsa, Cherokee and Beaver Counties. In addition, several other counties have successfully begun health screening programs, including a stroke detection day in Enid.

Additional activities of the Council include Dr. Marie Bernard's Task Force on Geriatric Care and her participation in the education about the End of Life Project (EPEC) sponsored by the Robert Wood Johnson Foundation and the AMA. The Perinatal Task Force met at the request of the Garfield County Medical Association and discussed the concerns of that community regarding the development of a Women's Center. This proposal, which would have included the closure of the two obstetrical and newborn centers at the Enid hospitals with a resultant decrease in medical care for the women and infants in the Garfield County area, was eventually abandoned.

The Public Relations Council, chaired by Dr. Gary Strebel, has worked closely with Communications Director Brenda Hays in developing our visibility with the media. Articles about the *State of the State's Health* report media briefing and other topics have resulted. The *Journal* has continued to publish important and informative data while providing a voice for the OSMA to its members. Dr. Ray McIntyre has continued to maintain a high level of editorial content for this important part of the OSMA. The energies and talent of Drs. Tim Walker and Andy Gin are appreciated as their plans for an information system continue to be developed.

The Council on Medical Services has actively evaluated several issues. Dr. Jack Beller, joined by Marisa New and the involved members of the Council, has continued to track the "Hassle Factor Log" issues. Details about the reports, the HMO "report card" and discussions about the Oklahoma State and Education Employees Group Insurance Board (OSEEGIB) are found under the Council's report to the OSMA. The Insurance Commissioner, Carroll Fisher, is interested in meeting about and resolving issues that are detailed in these logs. Meetings with the medical directors of the insurance companies continue.

The Member Services Council has reviewed the current recommended services. This council also receives reports from membership committees and the liaison committee between the OSMA and the OU College of Medicine. A successful mentoring program was developed with members of the Board of Trustees and the first-year medical students. Sixty-one new members were recruited from this class. This program will expand to include the Tulsa chapter's efforts with students at the OSU College of Medicine.

Dr. Kautilya Mehta has actively led the committee on International Medical Graduates, continuing to focus on the successful licensure of these members. Dr. Mehta continues with his successful assistance to the Oklahoma Board of Medical Licensure and Supervision.

The Council on Rural Health, chaired by Dr. Michael Boyer, considered and recommended the proposed redistricting of the OSMA in conjunction with the Council on Constitution and By Laws. This effort reflects the input of the physicians in rural Oklahoma.

The Physician Recovery Committee, chaired by Dr. James Gormley, and the Physicians' Recovery Program, led by Dr. Harrold Thiessen, have developed an informative brochure and expanded membership to include medical students. Discussions about the program have occurred with other state medical associations.

The Council on Continuing Medical Education, chaired by Dr.

## Report of the President (continued)

Roger Sheldon, has continued to provide essential reviews of the CME efforts for physicians. Site visits are required for certification, an additional time requirement for these council members.

Under the leadership of Chair Jeffrey Shaver, MD, and Secretary-Treasurer Sherry Strebel, OMPAC continues to build membership and increase its political viability. Also, Dr. David Selby is to be congratulated on his recent appointment to the AMPAC Board.

Your PLICO has responded to opportunities to change as well. Recent policy changes for part-time practicing physicians have been accepted. Responses by the Board to the influx of other liability carriers for Oklahoma physicians have been positive. Your PLICO report will detail this busy year.

The Alliance has continued to work to improve the health of Oklahomans. Thanks to the Alliance and Sherry Strebel, Medicine Day at the Capitol was a tremendous success. Mary Ellen Tallerico and her Health Promotions Committee provided Care Boxes for foster children and was recognized by the AMAA. Diane Cooke has successfully recruited members for OSMA councils. Congratulations to Susan Paddock, nominated as president-elect of the AMAA. Thanks to all for your help.

Your participation this year sets the record for continued, positive actions. Members have volunteered to serve through the above activities. Members who serve on the SoonerCare Task Force, Drs. John Stuemky, Paul Orcutt, and Tom Tyrone, together with this year's new appointees to the Oklahoma State Board of Licensure, Drs. James Gormely and John Leatherman are commended for their generosity. Their compassion, volunteerism, and charity are recognized. Their high energy in providing the best care for patients is obvious. And the level of frustration noted in coming up against a seemingly uncaring health care "system" could be self-defeating. This president has seen the glimmer of hope, a beginning of some response, and, coupled with the untamed energy that OSMA members can manifest, the issues that this organization has defined can be addressed. Your participation has made a difference. The difference can be seen in the improvement of the health of Oklahomans. Your donation of time and effort has resulted in these changes.

Thank you for the honor of serving.

Mary Anne McCaffree, MD  
1998-99 President, OSMA

## Annual Meeting Scrapbook...



## REPORT OF THE PRESIDENT-ELECT

Opening Session, OSMA House of Delegates

By Boyd O. Whitlock, MD

It is with great pleasure and some degree of anxiety that I prepare to serve as your President for the next year... A pleasure in that I will be associated with one of the best Medical Associations in the country but some feeling of anxiousness in that there are so many things to be done over the next few years if we are to accomplish our goals. I want to congratulate Dr. McCaffree and thank her for an excellent year. The theme of this annual meeting is "The Unbreakable Bond," the doctor-patient relationship that our Association hopes to preserve.

My primary aim this year will be to carry out the plan that has been set for us by the LRP committee. Dr. Andy Anderson, executive vice-president of the AMA, stated at the interim meeting that a successful organization must have a mission and a long range plan and that everything they do must be measured by that plan.

It is appropriate that our #1 goal is to improve and promote health education. Dr. Deckert's *State of the State's Health* report has certainly showed us many of the problem areas in which we need work. The Council on Public and Mental Health and the new Task Force, which has been appointed to carry out the "Physicians' Campaign for a Healthier Oklahoma," is heading in the right direction. We need to educate all of our physicians and their patients and to elicit their assistance in reaching this goal.

For us to accomplish any of our goals, we must have involvement from all Oklahoma physicians. We must maintain our current membership. We must remain unified. We must convince the 1,000 Oklahoma non-members that our association is important for them. AMA's executive vice president believes that membership is the #1 goal this year. A recent *Medical Economic* article points out that in 1962, 82 percent of American physicians were AMA members. This has now dropped to 42 percent or about 2. Only 32 percent of doctors in the 30-39 age group belong. We must realize there are many socio-economic factors involved here. For example, the number of practicing doctors who are employed by hospitals, HMOs, etc., is approaching 50 percent. These doctors see their needs as different than they were 25 years ago. We need to involve doctors at early stages of their careers when they are medical students and residents. Many of our specialty societies have doubled their memberships. We need to form a closer partnership with them. We need for all doctors to give us a little of their time, to work with our councils and committees and to contribute to OMPAC. We need to look at our Member Services Council and be sure we are offering services that are pertinent to today's doctors. All of the above will be considered as we work to accomplish goal #2, which is to increase membership and participation in OSMA. I am planning to appoint a task force on membership to consider these things.

Dr. Brandt, Lynne White, Kathy Musson, and the Legislative Council have put in many hours at the State Capitol, talking with our legislators and working with physicians in an effort to make our next goal, goal #3, into a reality. Goal #3 is to increase participation in the legislative and regulatory process. I think the leadership of our



association finally realizes the importance of our legislative efforts. Our lobbying efforts are also more improved, our support to OMPAC has increased, and we are moving in the right direction. We must improve the grass-roots efforts by all our doctors. Dr. William Frist, practicing cardiovascular surgeon and member of the US Senate from Tennessee, spoke to a medical group last year about getting doctors involved in politics. He said "If we are to preserve all that is good and sacred about the practice of medicine, we physicians no longer can operate solely within the operating theater of our individual clinical practice, standing on the side lines, readily commenting on—but rarely acting on medicine's decline. We must bring all our values, ethics, and skills out of the operating and exam rooms into the theater of public policy. Only as we apply our values and our ethics and our compassion to the challenges in this arena will the great tradition of medicine survive."

I'll mention the other goals briefly. Goal #4—Through the Medical Services Council, we are working with physicians in problems related to insurance and managed care. A recent AMA article states, "In Cincinnati, a local insurer just lowered physicians fees by five percent with no advance notice." So what else is new? The same happened here recently with our State employees insurance group. When we met with the insurance group, they said, "That's the way it's been and that's the way it will continue to be!" We are working on that. Managed care is here to stay. We need to utilize the good aspects of this system, but be sure to oppose those aspects that may be a detriment to physicians and their patients. Doctors are encouraged to use the Hassle Factor forms to let us know about their problems with insurance companies, Medicare, etc.

Goal #5 discussed increasing unity and collegiality within the medical profession and goal #7 has to do with communicating more effectively with physicians, patients, and the public. These go hand-in-hand with the membership activities I discussed previously. Physicians need to belong to their medical societies...not just because of PLICO or not just to get the benefits of the legislative endeavors of our grievance committee activities, but because it is their organization. Goal #6 talks about organization effectiveness and membership services and we need to continue to update this area to be current with physicians' needs.

I feel I need to mention the importance of our support of our AMA. The AMA is in a position to help all of us in areas of patient care quality, such as promoting a bill of rights, working with scope of practice issues, and insurance and governmental issues, such as fraud and abuse and anti-trust. Dr. Dickey, AMA President, says patient care quality problems, bill of rights, and access to care are AMA's #1 concerns. Dr. Allen Nelson, executive vice-president of American Society of Internal Medicine stated at our annual meeting one year ago, "We must continue to work with and in our specialty societies on problems related to our specific needs, but the real gorilla is the AMA. Only they have the size and strength and money to promote action on problems that relate to all of medicine." We need to thank Dr. Gregory and all of our AMA delegates for the work they do. We will depend on them to help us this year as we continue to educate our fellow physicians on the importance of AMA membership.

## Report of the President-Elect (continued)

We need to continue to support PLICO, our new credentialing service, and our Physicians' Recovery Program, all of which are noted throughout the medial community as outstanding examples in their areas. We need to work more closely with the specialty societies. We need to continue our progress in the field of electronic communication, which Dr. Selby encouraged so strongly during his term as president. We will continue to work, as partners, with our Alliance in areas of violence, medical education, and to support them in their "Excellence within the Heart of our Community" program.

We have many challenges ahead, goals that we can reach if we all work together in that direction. I hesitate to mention involvement or participation to you who are here. Most of you are convinced of the importance of being involved or you would not be here. Your task for this year is to help me and your association to challenge those physicians who are not yet convinced. We face an era when the great tragedy may be the silence of good. We must convince all our fellow physicians that their County Medical Society, their OSMA, and their AMA need their support.

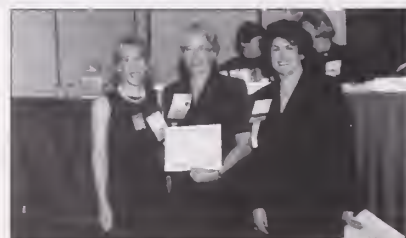
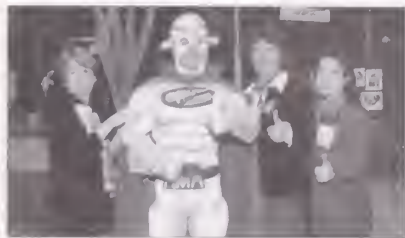
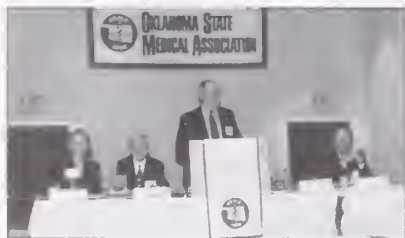
To again quote Dr. (Senator) Frist of Tennessee, "Because I've learned that what happens outside the theater of medicine ultimately shapes how we treat our patients, I will teach students and residents and my fellow physicians to pay attention to the world around them. Being a physician means that you can no longer live in the inside world of the clinical suite. To fulfill your obligation to patients, you must take off your white coat and begin to operate outside that theater—even if that also means outside your comfort zone."

Again, thank you for this opportunity and I will be looking forward to working with all of you in the coming year.

Thank You.

Boyd O. Whitlock, MD  
1999-2000 President, OSMA

## Annual Meeting Scrapbook...



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## REPORT OF THE EXECUTIVE DIRECTOR

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Opening Session, OSMA House of Delegates

By Brian O. Foy

Last year, as I addressed many of you for the first time, I stressed the need for the OSMA to come together as a team to confront the challenges ahead. Our theme at last year's meeting was "medicine at the crossroads" and there is no question that the practice of medicine has changed dramatically and will continue to change. As we prepare for the new millennium, the question I have may more aptly be stated as a challenge... how many physicians will stand by and watch the profession of medicine change (for better or worse) without input? How many physicians will "answer the call" and give some of their time back to help shape the profession they have sacrificed so hard for? Can you really afford not to be involved?



Organized medicine **can** make a difference. The AMA, OSMA, your county medical society, your specialty society, and the Alliance are your best advocates. None of these organizations will be effective, though, without membership and participation. It has been said that "you can't whistle a symphony; it takes an orchestra to play it." Well, the OSMA cannot conduct the symphony without a complete orchestra. The staff can hire the hall. We can arrange the chairs, print the programs, and show the audience to their seats. The leadership can select the music and even choose which musicians will take part in the performance. But when the curtain flies, the most beautiful music can only emanate from a full orchestra. And organized medicine is much the same.

In the face of increasing pressure from managed care, decreasing reimbursement, and reduced physician autonomy, it has never been more important for physicians to present a united front, to perform as a full orchestra, as it were. It is my hope that each of you will encourage your non-member colleagues to join this effort and to reach out to your inactive fellow members to help rekindle their interest. The obstacles we face are winable—but only if everyone involved is actively pursuing the same goals. To continue the analogy, we all need to be playing the same song. As we prepare for what lies ahead, let me briefly review some of the steps we have taken at the OSMA in the past year to better position the organization for its future challenges.

- In October, the Board of Trustees approved the endorsement of Hartzog, Conger & Cason, an Oklahoma City-based law firm, as the OSMA's new legal counsel. This relationship provides the OSMA with important legal services and includes limited legal services at no cost to OSMA members. Hartzog, Conger & Cason offer a wide variety of medical-legal services of benefit to physicians and their practices. The OSMA has already benefited tremendously from this relationship. Representing the firm here today is Linda Scoggins. I hope you will get a chance to meet Linda and get a better understanding of how her firm may be of assistance to you.
- In December, the OSMA Board and the Tulsa County Medical Society approved the final sale and transfer of the assets of the Oklahoma Centralized Verification Organization (OCVO) to the OSMA, effective January 1, 1999. This decision culminated eight months of investigation and negotiation for the OSMA takeover, which was approved in concept at last year's OSMA Annual Meeting. Under the capable leadership of Dr. Chris Carey, who currently chairs the OCVO Board of Managers, and Michele Seba, OCVO executive director, the OCVO is positioning itself to be the pre-eminent physician credentials verification organization in the state of Oklahoma. Having just recently moved into new office space and with plans to significantly upgrade its software and hardware capabilities, OCVO is preparing to expand its marketing efforts to all parts of the state. A special thank you is in order to the Tulsa County Medical Society, who parted with a very well-oiled machine. I hope that many of you will plan to visit the special OSMA breakfast forum featuring the OCVO tomorrow morning. Members of the current OCVO Board, as well as Michele Seba, will be on hand to share their vision and answer your questions.
- In an effort to upgrade our ability to provide service to the membership, the OSMA has expanded its staff. New staff positions include: a Director of Communications, responsible for coordinating OSMA publications, public relations, and media interaction; and a Director of Socio-Medical Economics and Health Care Policy, who will seek to strengthen OSMA's advocacy efforts in such critical areas as managed care, physician reimbursement, health care insurance and regulation, and public health. The OSMA also recently signed an agreement with an information technology consulting firm. Working with staff under the general direction of the Computer sub-committee, this consulting firm is currently working on Y2K issues and will soon shift focus to significantly upgrade our OSMA website and related communication technology needs. Our goal is to make our website more current, interactive and user-friendly. Stay tuned.
- In November, the OSMA conducted a thorough membership survey to assess member satisfaction and opinions regarding OSMA programs and activities. The results of this survey were reviewed by the Council on Planning and Development in January and used to revise the OSMA's goals and objectives. I strongly encourage you to read the complete report and results of the survey under the Report of the Council in your handbook. OSMA councils and committees will be using this information to guide their respective activities during the coming year. Many thanks to those of you who took the time to complete the survey. The response was tremendous — nearly 900 surveys or almost 20 percent! In the future, the OSMA will likely use shorter, more targeted surveys to acquire more specific feedback on certain areas.

## Report of the Executive Director *(continued)*

These are just a few of the steps the OSMA has taken this past year to enable us to better serve your needs. In the months ahead you will hear more specifics regarding individual programs and advocacy efforts as our councils and committees "roll up their sleeves" and develop the initiatives necessary to meet the OSMA's vision and goals.

My first full year as your Executive Director has been tremendously rewarding and educational. It has been a year of challenges and changes; changes for the better in my opinion. We are blessed with a very talented and capable group of hardworking staff who enjoy the demands of their jobs and realize the importance of supporting members committed to promoting the art and science of medicine. The work is difficult, even frustrating at times, but always rewarding.

As I peer into the future, into a new millennium, I see an organization led by capable leaders who are committed to doing what is necessary to preserve the art and science of medicine and protecting and enhancing the "unbreakable bond" between physician and patient, the cornerstone of the practice of medicine. I look forward to serving as your Executive Director and, with your guidance and support, meeting the challenges ahead. Thank you.

Brian O. Foy  
Executive Director, OSMA

## Annual Meeting Scrapbook...



## OPENING SESSION, OSMA House of Delegates (Draft)

Friday, April 16, 1999

### I. Call to Order, Invocation, and National Anthem

The House of Delegates convened the 93rd Annual Session of the House of Delegates at the Southern Hills Marriot in Tulsa on Friday, April 16, 1999. Bruce L. Storms, MD, Speaker, House of Delegates called the meeting to order at 8:30 a.m.

Delegates stood for the Pledge of Allegiance led by David Russell, MD.

The National Anthem was sung by Tulsa Memorial High School Choir under the direction of Dan Call.

The invocation was given by Dr. James Buskirk, Reverend, First United Methodist Church, Tulsa.

### II. Report of the Credentials Committee

Credentials Committee Chair, Barbara Hastings, MD announced that a quorum was present.

### III. Introductions

Dr. Storms introduced those at the head table: John R. Bozalis, MD, Vice Speaker of the House of Delegates; Mary Anne McCaffree, MD, President; Boyd O. Whitlock, MD, President-Elect; David L. Selby, MD, Immediate Past President; Robert J. Weedn, MD, Vice President; David Russell, MD, Chairman, Board of Trustees; Carol Imes, MD, Secretary-Treasurer; Brian O. Foy, Executive Director; Kathy Musson, Executive Associate Director; Diane Cooke, OSMA Alliance President; Cheryl Baker, OSMA Alliance President-Elect; Timothy Flaherty, MD, AMA Secretary-Treasurer

Dr. Storms then introduced and welcomed the following special guests: OSMA Past Presidents Ed Calhoon, MD; Joe Crosthwait, MD; Billy Dotter, MD; Norman Dunitz, MD; James Funnell, MD; Jay Gregory, MD; David Harper, MD; Perry Lambird, MD; Ray McIntyre, MD; Floyd Miller, MD; David Selby, MD; John McIntyre, MD. Also Wilford Watkins, AMPAC Representative; Merrell Rogers, Southern Medical Association Alliance President-Elect; Cheryl Van Cott, AMA Federation Relations (Field Representative); Kristy Kendrick, Chris Wagoner, and David Kendrick, Medical Student Section; Doris Clark, Jana Timberlake, and Debbie Adams, Oklahoma County Medical Society; Paul Patton and Tanya Luce, Tulsa County Medical Society; Michelle Seba, OCVO; and Linda Scoggins, OSMA Legal Representative.

Dr. Storms announced that Reference Committee Reports, Late Resolutions and various other reports were located in the back of the room.

Dr. Storms explained the candidates' forum to be held at the end of the House of Delegates meeting.

Dr. Storms announced the times of various meetings taking place during the weekend and also invited members to the OSMA/OSMAA Luncheon to be held directly following the House of Delegates meeting, as well as the OU Alumni Dinner and the Presidential Inaugural.

### IV. Approval of the Minutes of the 1998 Annual Meeting

Motion was made, seconded, and passed to approve the Opening and Closing Session Minutes from the 1998 OSMA Annual Meeting.

### V. AMA-ERF (Presentation of Checks)

Dr. Storms introduced Mrs. Diane Cooke, President of the Oklahoma State Medical Alliance. Mrs. Cooke thanked the OSMA for their support and gave a few brief remarks regarding the OSMAA. Mrs. Cooke introduced Susan Paddack, American Medical Association Alliance President-Elect, who then made brief remarks regarding the AMA and the OSMA fundraising efforts, education, and community service. Mrs. Cooke then introduced Sylvia Shirley, AMA Foundation Chair, who presented the Foundation checks to Dr. Dewayne Andrews, who accepted the check for the OU College of Medicine, Oklahoma City campus, and to Dr. Harold Brooks, OU College of Medicine Dean, Tulsa campus.

### VI. Presentations of Award

#### Journal Awards

Dr. Storms introduced Ray V. McIntyre, MD *Journal* Editor-in-Chief, to make the presentations of the *Journal* Awards

Dr. McIntyre presented the Charlotte S. Leebron Memorial Trust Fund Award to J. Michael Crutcher, MD; E. Kristen Moody, MPH; Robert W. Barker, PhD; and Jennifer L. White, MS, for their paper entitled "Ticks and Tick-borne Diseases in Oklahoma" published in November 1998

Thomas C. Cannon, MD, MPH was presented with the Mark R. Johnson Excellence in Medical Writing award. "Child Homicide in Oklahoma: A Continuing Public Health Problem" published in the November 1998 *Journal*. (Dr. Cannon was unable to attend)

Dr. McIntyre presented the Best *Journal* Cover Photograph Award to William S. Harrison, MD, Chickasha who photographed a mid-winter scene in Shanoan Park, January/February 1998.

Dr. Storms announced that Dr. McIntyre will be stepping down as Editor-in-Chief of the *Journal*. Dr. McIntyre made brief remarks regarding his experiences over the years with the *Journal*.

### Wyeth-Ayerst Physician Award for Community Service

Dr. Storms introduced Dr. David Russell to present the Wyeth Ayerst award to Dr. John Bozalis. The award was presented on behalf of his efforts as the program director working with the "Schools for Healthy Lifestyles."

### Don J. Blair, Friend of Medicine Award

Dr. John Bozalis presented the Don J. Blair Friend of Medicine award to Bobby Murcer for his outstanding work on the Tobacco Coalition (Bobby Murcer was unable to attend).

Mary Anne McCaffree, OSMA President, introduced the AMA Speaker, Timothy Flaherty, MD, American Medical Association Secretary-Treasurer.

### VII. Remarks from the AMA Speaker-Timothy Flaherty, MD

Timothy Flaherty, MD, AMA Secretary-Treasurer, thanked the officers and members of the association and made remarks concerning the AMA and various AMA endeavors concerning legislation, Alliance, finance, and various committees.

### VIII. Remarks from the President

Mary Anne McCaffree, MD, was called to the podium to make her outgoing address.

Dr. McCaffree thanked OSMA staff for all of their hard work. Dr. McCaffree stressed diversity and a strong foundation in response to progress. She spoke about some of the OSMA's biggest challenges of the year. She also spoke about the time and effort each physician has given in support of OSMA committees and task forces and thanked them for giving their time to voluntarily treat patients and help people outside of their various practices.

### IX. The Extinguisher Man

The AMA Extinguisher Man made comments about the crusade of a tobacco-free society and the works of the AMA and the Tobacco Free Coalitions across the state.

### X. Recess for Delegations Caucus

Dr. Bozalis declared a 10 minute recess for County Medical Society caucuses to prepare for nominations of the various association offices.

Nominations will be made from the floor and seconding speeches will not be made.

#### **XI. Nominations for Election**

Dr. John Bozalis, Vice Speaker of the House, announced the floor was open for nominations for the following positions:

##### **President-Elect**

Robert J. Weedn, MD, Stephens County

##### **Vice President**

Carol B. Imes, MD, Oklahoma County  
Gary Strebel, MD, Oklahoma County

##### **Secretary-Treasurer**

Jack Beller, MD  
Cleveland, McClain County  
Andrew Gin, MD, Oklahoma County  
Greg Ratliff, MD, Tulsa County

##### **Trustees**

**District I:** Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, and Washington Counties  
Thomas Tryon, MD  
Edward Allensworth, MD, Alternate Trustee

**District IV:** Beaver, Cimarron, Dewey, Ellis, Harper, Major, Texas, and Woodward Counties  
Janice Chleborad, MD, Alternate Trustee

**District VI:** Oklahoma County  
Robert Wilson, MD  
James Mayes, MD, Alternate Trustee

**District XI:** Atoka, Bryan, Choctaw, Coal, McCurtain, and Pushmataha Counties  
Jerry D. Whatley, MD  
Steven Ortlip, MD, Alternate Trustee

**District XII:** Carter, Garvin, Johnston, Love, Marshall, Murray, and Pontotoc Counties  
William Gideon, MD

**District XIII:** Cotton, Tillman, Grady, Jefferson, and Stephens Counties  
Kent King, MD, Alternate Trustee

##### **AMA Delegation:**

###### **Delegates:**

Norman Dunitz, MD, Tulsa  
William Hall, MD, OKC  
Mary Anne McCaffree, MD, OKC  
Gary Strebel, MD, OKC

###### **Alternate Delegates:**

Susan Harmon, MD, OKC  
Carl T. Hook, MD, Norman  
Mukesh Parekh, MD, OKC  
Sanku Rao, MD, Enid  
Barbara Hastings, MD, Tulsa

##### **Plico Board of Directors:**

B.D. Dotter, MD  
Lynn Frame, MD  
Emily Friedman, MD  
James D. Funnell, MD  
Gary Paddack, MD  
Tim Smalley, MD  
Kenneth Whittington, MD

##### **OCVO Board of Managers:**

Mike Aaron, MD  
J. Christopher Carey, MD  
Kurt Frantz, MD  
Barbara Hastings, MD  
Jay Leemaster, MD  
Mary Anne McCaffree, MD  
Steven Mueller, MD  
Gary Paddack, MD  
W.F. Phelps, MD  
Mike Talley, MD  
Thomas Tryon, MD

#### **XII. Remarks of the Chairman of the Board of Trustees**

Dr. Bozalis called Dr. McCaffree to the podium to recognize Dr. Russell, Chairman of the Board of Trustees. She thanked him for all of his dedication and hard work and presented him with a clock from the officers and House of Delegates.

Dr. Russell was elected to another term as Chairman of the Board of Trustees. He briefly discussed some of the actions of the Board. Some of the Board's main tasks were the acquirement of OCVO, and the acceptance by the board of the recommendation from the Council on Public and Mental Health to form a task force to aid in the commitment of good health for the people of Oklahoma. Dr. Russell also stated that supplemental materials were available in the back of the room.

#### **XIII. Remarks from the Secretary-Treasurer**

Carol B. Imes, MD thanked the officers and Delegates for the privilege of serving as Secretary-Treasurer and for their support and confidence. Dr. Imes stated that her task was enabled by the efficient and diligent work by Shirley Burnett, OSMA Comptroller.

Dr. Imes updated the Delegates on the information provided in the handbook and highlighted reports, stating that all are positive, including an excellent rating on the audit report, an increase in assets, and the increase of cash and equivalents. She also thanked PLICO for all of their financial support.

#### **XIV. Reports of the Constitution and Bylaws Chairman**

Dr. Bozalis updated the House on various changes and recommendations being proposed by the bylaws committee, which will be presented in Reference Committee I. One of

the recommendations was the medical student section. The second was resolution 29 from 1998. Third, was from the Board to look at changing the Planning & Development Council. The last recommendation was reapportionment that will change the districts from 13 to 14 districts with one Trustee-at-large. It will be the first time for reapportionment in 50 years.

#### **XV. Report of the Executive Director**

Mr. Brian O. Foy addressed the House and spoke about the challenges of the new millennium. He stressed the need to come together as a family and participate in the OSMA as a whole, as well as acquire new members in the medical field. Mr. Foy thanked the staff for all of their hard work and announced new staff positions filled by Marisa New and Brenda Hays. He also thanked the Oklahoma County Medical Society and the Tulsa Medical Society.

Mr. Foy spoke on the steps that OSMA has taken to better position the organization for the future. These steps include the approval from the Board of Hartzog, Carson & Cason as the OSMA legal counsel and the successful takeover of the Oklahoma Centralized Verification Organization. In closing, Mr. Foy stated that he looked forward to the new year and thanked the officers and Delegates for the privilege of serving as their Executive Director.

#### **XVI. Presentation of Business to Come Before the House**

Dr. Storms announced the times of the Reference Committees and announced the late resolutions that will be presented, which include Late Resolution 20 in Reference Committee II, Late Resolution 21 in Reference Committee III, and Late Resolution 22 in Reference Committee III. Dr. Storms announced that the Reference Committee reports will be available at the OSMA registration on Saturday, after 4 p.m. He also reminded the Delegates that voting will be from 7:30 a.m. until 9 a.m. on Sunday and all Delegates will need their Delegate cards in order to participate.

#### **XVII. Necrology Report**

Dr. Bozalis asked the Delegates to stand as he read the names from the necrology report. After reading the names, there was a moment of silence in remembrance.

#### **XVIII. Recess**

There being no further business to come before the House, a motion was made, seconded, and passed to recess the Opening Session of the House of Delegates until 9 a.m. Sunday, April 18, 1999.

## CLOSING SESSION, OSMA House of Delegates (Draft)

Sunday, April 18, 1999

### I. Call to Order

The Closing Session of the 93rd Annual Meeting of the House of Delegates was called to order by Bruce L. Storms, MD, Speaker, House of Delegates, at 9 a.m. at the Tulsa Southern Hills Marriott.

### II. Invocation

Mrs. Diane Cooke, outgoing OSMA Alliance President, gave the invocation.

**III. Report of the Credentials Committee**  
Credentials Committee Chairman, Barbara Hastings, MD announced that a quorum was present.

### IV. Announcements

Dr. Storms announced that Reference Committee reports and Late Resolutions are on a table in front of the entrance to the House of Delegates. Immediately following the House of Delegates a luncheon for the new Officers, AMA Delegates/Alternate Delegates and Trustees will be held in the Pecan room. Dr. Storms announced the AMA Foundation Silent auction winners and informed the Delegates that amendments to the Reference Committee Reports need to be in writing with the original taken to the Tellers desk who will forward to staff. Amendments will not be accepted verbally on the floor, only in writing.

Dr. Wilfred Watkins, a member of the AMPAC Board, was introduced as well as Dr. David Selby.

### V. Remarks of Jay A. Gregory, MD

Dr. Storms introduced Jay A. Gregory, MD to make a presentation to Dr. Jeffrey Shaver, OMPAC Chairman. Dr. Gregory stated that Dr. Shaver will not be OMPAC Chair for the next year but wanted to thank him for his work on the OMPAC Board. Dr. Gregory announced that Jack Beller, MD was elected OMPAC chair and Dr. Lee Schoeffler was elected vice chair. Dr. Shaver thanked the members for allowing him to serve and stated that the OMPAC registration booth is still open and encouraged all members to join OMPAC.

### VI. Remarks of Edward Brandt, MD

Dr. Storms introduced Edward Brandt, MD. Dr. Brandt asked for a point of personal privilege stating that this Association is blessed by having an excellent staff. He thanked Lynne White for her efforts on

behalf of the legislative session. Dr. Brandt asked the House to recognize the staff for their efforts.

### VI. Remarks of the Incoming President

Dr. Storms introduced Boyd O. Whitlock, MD, to make remarks before the House.

Dr. Whitlock thanked the Delegates for the honor of serving as President in the coming year. Dr. Whitlock congratulated Mary Anne McCaffree, MD, for her excellent year. He stated that his primary aim this year will be to carry out the plan which has been set by the Long Range Planning Council. He also stated that it is appropriate that our number one goal is to improve and promote health education. Dr. Deckert's *State of the State's Health* report has shown many of the areas in which OSMA will need to work, and the Council on Public and Mental Health as well as the new Physicians' Campaign for a Healthier Oklahoma Task Force is certainly heading in the right direction. OSMA needs to educate all physicians and their patients and to elicit their assistance in reaching this goal.

Dr. Whitlock stated that for OSMA to accomplish any of the goals we must have involvement from all Oklahoma physicians; we must maintain our current membership; we must remain unified, and we must convince the 1,000 Oklahoma physicians who are non members that our Association is important for them. Dr. Whitlock stated that the number of practicing physicians employed by hospitals or HMOs is almost 50 percent and that these doctors see their needs differently from 25 years ago.

In closing, Dr. Whitlock stated that we need to continue to support PLICO, OCVO, and the Physicians Recovery Program all of which are noted throughout the medical community as outstanding examples in their areas. He stated that OSMA needs to continue their progress in electronics communication. In closing, Dr. Whitlock stated that there are many challenges ahead with goals that we can reach if we all work together. Your task this year is to help me and your Association in convincing all physicians that their county medical society, their OSMA, and their AMA need their support.

### VII. Recess

Dr. Bozalis declared a recess for the Annual PLICO Shareholders meeting.

**VIII. Annual Plico Shareholders Meeting**  
The Annual Shareholders meeting of PLICO

was convened in session by Floyd Miller, MD, PLICO Chairman.

Dr. Miller stated that the written Annual Report was made available as a handout and requested that the report be approved following his presentation.

Dr. Miller stated that PLICO now has about \$19 million in surplus and capital, \$105 million in reserves and \$90 million in re-insurance. He informed the Delegates that PLICO has the best occurrence policy in the United States and the only policy that carries protection for your professional liability but also for your activities. He stated that C.L. Frates has been an excellent management company for PLICO and that the defense attorneys for PLICO have been very successful with close to 90 percent of the cases being won.

Dr. Miller stated that PLICO will be more competitive with a much superior policy than the competition. Dr. Miller informed the members last year the OSMA altered their bylaws and allowed osteopathic physicians to become members. PLICO agreed to charge the same rate to the DO member as was charged to the MD member. Next year the non-member DO will be charged the same rate as the non-member MD.

Dr. Miller updated the members on PLICO Health informing them of the new PPO plan that has been implemented. This plan has been extremely successful and PLICO now has about 1,100 physicians, about 2,000 MDs insured and about 2,500 employees insured with another medicare supplement policy.

Dr. Miller thanked the delegates for their support of PLICO and asked that the Annual Report be approved as written. Motion was made, seconded and passed to approve the PLICO Annual Report.

### IX. Annual Report of the Oklahoma Centralized Verification Organization (OCVO)

Dr. Bozalis introduced Dr. Carey who gave the report of the OCVO.

Dr. Carey stated that Reference Committee I will ask for the approval of the OCVO report and requested that this report be approved by the Delegates.

Dr. Carey stated that since the last meeting the Board of Trustees was challenged to incorporate the OCVO into the OSMA. The OSMA Board and various committees have been busy since that time. Dr. Carey stated that it was concluded that OCVO could become a service organization integrated statewide and a benefit to all members of the OSMA.

Dr. Carey thanked Tulsa County Medical Society for their help in the transition.

## Reconvene

### **X. Report of the "Physicians' Campaign for a Healthier Oklahoma" Task Force**

Dr. Bozalis introduced Robert Weedn, MD, to give the Report of the Task Force.

Dr. Weedn thanked the House for their support in the commitment to their patients, the public, colleagues, and the Association. Dr. Weedn discussed the beginnings of the "Physicians' Campaign for a Healthier Oklahoma" and the work the Task Force will be completing in the coming year.

Dr. Weedn stated that it is important for doctors to teach as well as treat and to prevent as well as heal. Dr. Weedn stated that it is important to enhance wellness as well as treat illness. He stated that this campaign should be about putting our best foot forward and into the doors that need to be opened. The Campaign should show our hearts and help us win a place in the hearts of the patients and public.

In closing, Dr. Weedn stated that it will take time to see outcomes reflected in the *State of the State's Health* report.

### **XI. Update from Jay A. Gregory, MD AMA Delegation Chair**

Dr. Gregory updated the Delegates on his upcoming campaign for the AMA Board of Trustees and explained why he is running for the Board and the changes that need to take place for organized medicine.

### **XII. Election Results**

Dr. Storms declared the slots not contested, elected, and announced the election results.

#### **President (one-year term)**

Boyd O. Whitlock, MD

#### **President-Elect (one-year term)**

Robert J. Weedn, MD

#### **Vice-President (one-year term)**

Gary Strebel, MD

#### **Secretary-Treasurer**

Jack J. Beller, MD (two-year term)

#### **AMA Delegates**

Norman Dunitz, MD  
William H. Hall, MD  
Mary Anne McCaffree, MD  
Gary Strebel, MD

#### **AMA Alternate Delegates**

Susan Harmon, MD  
Barbara Hastings, MD  
Carl T. Hook, MD  
Mukesh Parekh, MD

### **PLICO Board of Directors**

B.D. Dotter, MD  
Lynn Frame, MD  
James D. Funnell, MD  
Gary Paddock, MD  
Tim Smalley, MD  
Kenneth Whittington, MD

### **OCVO Board of Managers**

J. Christopher Carey, MD  
Kurtz Frantz, MD  
Steven Mueller, MD  
Barbara Hastings, MD  
Mary Anne McCaffree, MD  
Gary Paddock, MD  
W.F. Phelps, MD  
Jay Leemaster, MD  
Mike Talley, MD

### **OSMA Trustee/Alternate Trustee Positions**

**District I:** Trustee: Thomas Tryon, MD  
Alternate: Edward Allensworth, MD  
Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, and Washington Counties

**District IV:** Alternate: Jan Chleborad, MD  
Beaver, Cimarron, Dewey, Ellis, Harper, Major, Texas, and Woodward Counties

**District VI:** Trustee: Robert Wilson, MD  
Alternate: James Mays, MD  
Oklahoma County

**District XI:** Trustee: Jerry D. Whatley, MD  
Alternate: No candidate  
Atoka, Bryan, Choctaw, Coal, McCurtain, and Pushmataha Counties

**District XII:** Trustee: William Patrick Gideon, MD  
Alternate: No candidate  
Carter, Garvin, Johnston, Love, Marshall, Murray, and Pontotoc Counties

**District XIII:** Alternate Trustee: Kent King, MD  
Cotton, Tillman, Grady, Jefferson, and Stephens Counties

Dr. Storms congratulated the new officers and encouraged them to stay for the new officers' luncheon and to remain for pictures after the Closing Session.

### **XIII. 2nd Reading—Bylaw Amendment**

Dr. Storms stated that these changes were read for first reading last year and are located under Tab I in the handbook. Dr. Storms stated that there were three areas to be voted on and they were not debatable. Grammatical changes can be brought to the Speakers attention: 1) Re-alignment of the *Journal* and the formation of the two Councils; Professional

and Public Relations and the Council on Professional Communications. **Amendments were passed by the House.** 2) Change in Amendments to the OSMA Bylaws. Amendments were passed by the House. 3) Miscellaneous changes noting one change on page 3 line 23 changing adoption from April 96 98 to 99. **Amendments were passed by the House.**

### **XIV. Reference Committee Reports**

Dr. Storms informed the Delegation of the procedures for the Reference Committee Reports. All amendments will need to be made in writing and given to the Tellers. The Reference Committee Reports are divided into items for discussion and a consent calendar, which will state adopted, filed for information, or not adopted. Dr. Storms stated as a procedural matter there are a few items in the Reference Committee reports where two resolutions deal with the same items. The Reference Committee will put forth a substitute resolution; the lower number of the two items combined will be the number of substitute resolution. Dr. Storms asked that members of the Reference Committee be seated on the first row.

#### **Report of Reference Committee I —**

##### **E. Bradley Garber, MD**

Mr. Speaker and Members of the House of Delegates:

Reference Committee I gave careful consideration to the several items referred to it and submits the following report:

Mr. Speaker, your Reference Committee recommends to adopt the following reports on the Consent Calendar:

#### **Consent Calendar**

#### **Recommended for Adoption**

- 1) **Report of the Board of Trustees**
- 2) **Supplemental Report of the Board of Trustees**
- 3) **Report of the Council on Planning and Development**
- 4) **Report of the Secretary-Treasurer**
- 5) **Report of the Membership**
- 7) **Resolution 3  
DEA Numbers for Marketing Purposes**
- 8) **Resolution 4  
Youth Risk Behavior Survey**

Mr. Speaker, your Reference Committee recommends the following reports be filed for information:

**Filed for Information**

- 9) **Report of the Appropriations and Audit Committee**
- 10) **Report of the OSMA Alliance**
- 11) **Report of the Oklahoma Centralized Verification Organization**
- 12) **Report of the President**
- 13) **Report of the AMA Delegation**

Mr. Speaker, your Reference Committee recommends to adopt the following reports and resolutions with changes listed below.

**Recommended to be Adopted**

- 14) **Report of the Constitution and Bylaws Committee**

**Recommendation:**

Mr. Speaker your Reference Committee recommends the Report of the Constitution and Bylaws Committee be adopted with the following change and recommendation:

**Medical Student Section (MSS)  
Delegate Representation**

The Committee recommends the following wording change:

Page 2 Line 1: Deleting the word for and replacing with the word from

**Trustee Re-apportionment**

The Committee recommends upon adoption of this recommendation that the Board of Trustees immediately develop guidelines for election in the altered Trustee Districts to ensure a workable transition for all current Trustees and Alternates.

- 15) **Report of PLICO**

**Recommendation:**

Mr. Speaker your Reference Committee recommends the Report of PLICO be Filed for Information and further that the following statement be adopted:

Your Reference Committee strongly urges each and every member of the House of Delegates to carefully review the Report of PLICO. As PLICO enters an era of increased competition and threats from competitive forces, it is imperative that every PLICO-insured physician be reminded as to the value of a PLICO insurance policy. It is the recommendation of this Reference Committee that every PLICO

insured become thoroughly knowledgeable and pro-active in their support of PLICO and its many beneficial products and services. The Reference Committee further recommends that the OSMA be strongly supportive of PLICO in its efforts to become increasingly competitive in the physician liability insurance market.

- 16) **Resolution 2**

**Electronic Pre-Certification Recommendation:**

Mr. Speaker, your Reference Committee strongly supports this resolution; however, recommends referral to the Board of Trustees for study and implementation if appropriate.

Mr. Speaker, your Reference Committee recommends the following Resolution not be adopted:

**Recommended Not be Adopted:**

- 17) **Resolution 1**

**Discrimination**

**Recommendation:**

Mr. Speaker, your Reference Committee recommends Resolution 1 not be adopted.

- 18) **Resolution 5**

**OBMLS Licensing Examination Rule Recommendation:**

Mr. Speaker, your Reference Committee recommends Resolution 5 not be adopted.

The Report of Reference Committee I was approved by the House of Delegates as a whole, as amended.

**Reference Committee II**

Mr. Speaker and members of the House of Delegates:

Reference Committee II gave careful consideration to the several items referred to it and submits the following report:

Mr. Speaker, your Reference Committee recommends to adopt the following reports on the Consent Calendar:

**Consent Calendar**

**Recommended for Adoption:**

- 1) **Report of the Council on Professional and Public Relations**
- 2) **Report of the Organized Medical Staff Section**
- 3) **Report of the "Physicians' Campaign for a Healthier Oklahoma"**
- 4) **Resolution 6 Tobacco Control**

- 5) **Resolution 8 Rotavirus Vaccine**

- 6) **Resolution 9 Clinical Preventive Services**

- 7) **Resolution 11 Guns in Schools**

Mr. Speaker, your Reference Committee recommends the following reports be filed for information:

**Filed for Information**

- 8) **Report of the Public and Mental Health**
- 9) **Report of the Council on Rural Health**
- 10) **Report of the Medical Student Section**

Mr. Speaker, your Reference Committee recommends to adopt the following reports and resolutions with changes listed below.

- 11) **Report of the Council on Medical Services**

**Recommendation:**

Mr. Speaker, your Reference Committee recommends the Report of the Council on Medical Services be accepted with the following amendments:

Page 3, Line 17—Insert a period after AMA and delete "as follows."

- 12) **Resolution 7**

**Environmental Tobacco Smoke**

Mr. Speaker, your Reference Committee recommends Resolution 7 be adopted.

Your reference committee further recommends that the Board of Trustees along with OSMA Staff seek smoke free facilities for all OSMA events.

- 13) **Resolution 10**

**Oklahoma Two-Year Old Immunization Levels**

Mr. Speaker, your Reference Committee recommends Resolution 10 be adopted with the amended Resolve:

*RESOLVED, That the Oklahoma State Medical Association encourage physicians serving children to reduce barriers to vaccination, to participate in the Oklahoma Statewide Immunization Information System, encourage tracking and recalling children who are under-vaccinated, and to implement actions for reducing missed opportunities for vaccination.*

**14) Resolution 12  
Firearm Safety and Children  
Recommendation:**

Mr. Speaker, your Reference Committee recommends Resolution 12 be Referred to the Board of Trustees for further study.

**15) Resolution 13  
Substance Abuse Task Force  
Recommendation:**

Mr. Speaker, your Reference Committee recommends that the first Resolve be adopted and the second Resolve be referred to the Board of Trustees for clarification and further study.

*RESOLVED, That the OSMA publicly commend Governor Keating and his Substance Abuse Task Force for this great service to the people of Oklahoma.*

**16) Late Resolution 20  
Folic Acid for the Prevention of Neural  
Tube Defects**

Mr. Speaker, your Reference Committee recommends Resolution 20 be adopted with the following wording changes:

Line 18—Delete "will" and add "are encouraged to"

Line 23—after "multivitamins" add "with folic acid"

Line 26—after "multivitamins" add "with folic acid"

The Report of Reference Committee II was approved by the House of Delegates as a whole, as amended.

Point of personal privilege by Ron Kreger, MD. Dr. Kreger stated that he would request that Delegates be present in the Reference Committee Meetings and commended the staff for contribution to the report.

**Report of Reference Committee III**

Mr. Speaker and Members of the House of Delegates:

Reference Committee III gave careful consideration to the several items referred to it and submits the following report:

Mr. Speaker, your Reference Committee recommends to adopt the following reports and resolutions on the Consent Calendar:

**Consent Calendar**

**Recommended for Adoption:**

- 1) Report of the Council on Governmental Activities**
- 2) Resolution 16  
Patient Choice in Medicare Reform**

Mr. Speaker, your Reference Committee recommends the following reports be filed for information:

**Filed for Information**

- 3) Report of the Council on State Legislation and Regulation**
- 4) Report of the Council on Member Services**
- 5) Report of the Council on Medical Education**
- 6) Report of the Committee on Medical Ethics and Competency**
- 7) Report of the Physicians Recovery Committee**
- 8) Report of the Physicians Recovery Program**
- 9) Report of the Commission on International Medical Graduates**
- 10) Report of the Oklahoma Medical Political Action Committee**

Mr. Speaker your Reference Committee recommends to adopt the following reports and resolutions with changes listed below.

**Recommended to be Adopted**

**11) Resolution 15  
Federal Tax Legislation  
Recommendation:**

Mr. Speaker, your Reference Committee recommends that Resolution 15 be adopted with the following amended resolve:

*RESOLVED, That the OSMA encourage the AMA to actively advocate the development of federal tax legislation which would encourage the independent purchase of health insurance by individuals and families.*

**12) Resolution 18  
HCFA Assault**

**Late Resolution 21  
AARP-HHS  
Recommendation:**

Mr. Speaker, your Reference Committee considered Resolutions 18 and 21 together and recommends Substitute Resolution 18, AARP-HHS Assault, be adopted:

*RESOLVED, That as a result of the current AARP-HHS initiative on physician fraud and abuse activities, the OSMA should provide a response team to assist all accused physician members; and be it further*

*RESOLVED, That a database of questionable AARP-HHS activities be maintained so that the OSMA can provide appropriate review; and be it further*

*RESOLVED, That the OSMA send a resolution to the AMA commending the AMA on its attempt to combat the new AARP-HHS initiative to combat alleged health care fraud and abuse; and be it further*

*RESOLVED, That the OSMA call upon the AMA to use all possible legal remedies to abolish this new AARP-HHS initiative to combat alleged health care fraud and abuse.*

**13) Resolution 19  
Uniform Credentials Verification  
Application Process  
Recommendation:**

Mr. Speaker, your Reference Committee recommends that the following Substitute Resolution 19 be adopted:

*RESOLVED, That the initial and reappointment credentialing forms utilized by the Oklahoma Centralized Verification Organization be submitted to the Oklahoma State Department of Health for review and acceptance as the prototype uniform applications.*

**14) Late Resolution 22  
Youth Suicide Task Force  
Recommendation:**

Mr. Speaker, your Reference Committee recommends that Late Resolution 22 be adopted with the additional resolve:

*RESOLVED, That the OSMA encourage the Governor to appoint physician members of the Oklahoma State Medical Association to the Youth Suicide Prevention Task Force.*

**15) Resolution 14  
Mandated Insurance Coverage for  
Contraception Services  
Recommendation:**

Mr. Speaker, your Reference Committee recommends that Resolution 14 be referred to the Board of Trustees for action.

Mr. Speaker, your Reference Committee recommends the following Resolutions Not Be Adopted:

**Recommended Not be Adopted:**

**16) Resolution 17  
Continuing Medical Education (CME)  
Identification Method**

The Report of Reference Committee III was approved by the House of Delegates as a whole, as amended.

Dr. Andrew Gin requested a point of personal privilege stating that the difficulty for the committee was not having the author of the Resolution defending the points for the

Resolution. Dr. Gin thanked the Committee members and staff for their work on development of the report.

#### **XV. Other Business**

Dr. Storms thanked all the Delegates for their participation in the Reference Committee meetings, CME sessions, and other activities of the Annual Meeting.

Dr. Storms recognized Wilfred Watkins, MD, AMPAC Representative, to make presentations to OMPAC for their yearly renewals. Dr. Watkins encouraged all Delegates to become members of OMPAC.

Dr. Mary Anne McCaffree drew the names of the winners who attended all the exhibits.

Mary Anne McCaffree, MD  
Janet Rogers, MD  
Carol Imes, MD

Dr. Storms reminded the new officers to remain in the lobby for pictures and that a luncheon for the new officers will be held in the Sycamore Room immediately following.

Dr. Storms announced the WPS awards: Kent King, MD and Gary Paddack, MD.

Patrick Lester, MD asked for a point of personal privilege. Dr. Lester thanked the AMA Delegation for their kind words and support for his work on the AMA. Dr. Lester stated that his decision not to run was for a personal reason and had nothing to do with the OSMA/AMA. Dr. Lester stated that the Oklahoma delegation has been very active and is encouraged by the change in leadership in the AMA.

#### **XVI. Adjournment**

A motion was made to adjourn the 93rd Annual Meeting of the House of Delegates.

Next year's meeting will be held at the Westin Hotel in Oklahoma City on April 27-30, 2000.

## **REFERENCE COMMITTEE I**

### **■ REPORT OF THE APPROPRIATIONS AND AUDIT COMMITTEE**

FILED FOR INFORMATION

Subject: Annual Report

Presented by: Mark Johnson, MD,  
Chairman

Referred to: Reference Committee I

#### **Introduction**

The Appropriations and Audit Committee is responsible for the annual audit of accounts and to review the draft of the OSMA Budget and make recommendations.

#### **Review of Activities**

The Appropriations and Audit Committee met twice during the 1998-99 Association Year: on November 9, 1998; and again on March 9, 1999. Both meetings were held at OSMA Headquarters.

At its November meeting, the Committee reviewed the proposed 1999 Annual Budget. This budget had been presented to the Board of Trustees in October with a proposal to use a portion of the reserves to offset a significant increase in programmatic activities. The Board declined the request to utilize any portion of the OSMA Reserves and directed the Appropriations and Audit Committee to revisit the proposed budget and make the necessary changes to reflect a balanced budget absent use of any reserves. The Secretary-Treasurer and Executive Director completed this task and reviewed their efforts with the Committee. The approved, revised budget was mailed to the Board and subsequently approved during a teleconference on December 29, 1998. A copy of this budget is included with the Report of the Secretary-Treasurer and is presented for final House of Delegates approval.

At its March meeting, the Committee reviewed the draft report of the results of the 1998 OSMA Audit, as prepared by Ernst and Young, LLP. The Committee also reviewed the audited financial statements for the years ended December 31, 1998 and 1997. A representative from Ernst & Young joined the Committee via teleconference to review the reports/statements and answer questions. Also present: Dale Neikirk, CPA, Assistant Secretary-Treasurer, Physicians Liability Insurance Company (PLICO), Brian O. Foy, OSMA Executive Director; and Shirley Burnett, OSMA Comptroller.

The Appropriations and Audit Committee accepted both reports as present-

ed by Ernst & Young LLP. Copies of the reports are in the financial section for your review, following the Report of the Secretary-Treasurer.

Respectfully submitted,  
Mark Johnson, MD, Chairman  
David S. Russell, MD  
C. Wallace Hooser, MD  
Carol B. Imes, MD  
David M. Selby, MD

### **■ REPORT OF THE BOARD OF TRUSTEES**

ADOPTED

Reference Committee I (A-99)

Subject: Annual Report

Presented by: David S. Russell, MD, Chair

Referred to: Reference Committee I

#### **Introduction**

Your OSMA Board of Trustees scheduled quarterly meetings for the organizational year 1998-1999. As of this report, three of the scheduled meetings have been completed. The fourth of the regularly scheduled meetings will be held in conjunction with the 1999 Annual Meeting of the OSMA; the proceedings of this meeting will be contained in a Supplemental Report of the Board of Trustees to the House of Delegates. In addition, a Special Meeting of the Board was called on December 29, 1998.

During the past year, the Board met in scheduled sessions on July 12, 1998, and January 17, 1999 in Oklahoma City and on October 18, 1998, in Tulsa. The Special Meeting of December 29, 1998, was convened in Oklahoma City and by teleconference. A quorum was certified for each meeting. If determined to be feasible, meeting locations other than Oklahoma City and Tulsa will be considered to encourage attendance by OSMA members from around the state.

#### **Council, Committee and Special Reports**

During each meeting, OSMA Councils, Standing Committees, Special Sections and Ad Hoc Committees presented reports to the Board. The Board also heard reports from PLICO, OCVO, and the OSMA Alliance. As each of the entities also report directly to the House of Delegates, they will not be presented here except for any special actions taken by the Board.

### Report of Board Actions

Outlined below are actions taken by the Board of Trustees in response to information and recommendations presented.

#### At the meeting of July 12, 1998, in Oklahoma City, the Board:

- Seated Randall Jenkins, MD, Alternate Trustee, as Trustee from District XIII on the resignation of Kenneth Vermette, MD.
- Approved the Report of the Secretary-Treasurer and the OSMA Financial Report as presented through May 31, 1998.
- Received the report of the OCVO Task Force. The Board approved the recommendations of the Task Force and voted to:
  - 1) assume full ownership and operational control of OCVO; and
  - 2) establish an OCVO Transition Committee of the Board to review options for implementation of the takeover including estimating current and projected future costs.
- Formed a Sub-committee to explore the feasibility of conducting an initiative petition drive to amend the Oklahoma Constitution to create a board to review all scope of practice issues.
- Approved the establishment of a Campaign Fund Oversight Committee to develop a policy for expenditure of funds from the AMA Candidates Campaign Fund and authorized transfer of \$15,000 to the Fund representing contributions of \$5,000 for the years 1996, 1997, 1998.
- Accepted the recommendations from the Computer Sub-committee of the Professional and Public Relations Council to form an OSMA Information Systems (IS) Division. The Computer Sub-committee will develop a long-range plan with recommendations for an IS Division structure and Director.
- Approved the Life membership applications for the following:  
Ned T. Harney, MD, Tulsa  
Richard E. Harrison, MD, Norman  
J. William Hood, MD, Oklahoma City  
Galen P. Robbins, MD, Oklahoma City  
Bobby G. Smith, MD, Oklahoma City  
Harry B. Stults, MD, Oklahoma City
- Approved the Special Membership applications for the following:  
Arthur A. Hellman, MD, Midwest City  
Marilynn E. Lins, MD, Tulsa  
Forest D. Harris, MD, Lawton

#### At the meeting of October 18, 1998, in Tulsa, the Board:

- Approved the nominations of Jerry D. Whatley, MD, labeled as Trustee for District XI and Edward Allensworth, MD, Vinita, as Alternate Trustee for District I.
- Accepted a recommendation from the Executive Committee to hire the firm of Hartzog, Conger, & Cason as the OSMA Legal Counsel.
- Approved the Campaign Fund Oversight Committee guidelines for expenditures from the AMA Candidates Campaign Fund; the guidelines had been approved by the Finance, Personnel & Compensation Committee.
- Approved the Secretary-Treasurer's Report and the OSMA Financial Report as presented through August 31, 1998.
- Approved an amended budget presented to the Board at the meeting with the stipulation that the reserves not be invaded and that the budgeted amounts be adjusted so that a balanced budget is achieved.
- Considered and acted on a report from the OCVO Transition Committee. The Committee presented 14 goals and 11 recommendations for the transfer of ownership and operational control of OCVO from Tulsa County Medical Society to the OSMA. One goal concerning transfer expenses was replaced. All goals including the replacement goal and all recommendations of the OCVO Transition Committee were accepted.
- Approved an OCVO Advisory Board, as recommended by the Transition Committee, charged with:
  - 1) retaining legal counsel;
  - 2) developing a purchase and sales agreement to transfer the OCVO from TCMS to OSMA;
  - 3) establishing a Limited Liability Corporation; and
  - 4) establishing marketing and business plans.
- Accepted a recommendation to have the transfer completed, if possible, by January 1, 1999.
- Approved the Legislative goals as presented by the Council on State Legislation and Regulation.
- Accepted a recommendation from the Initiative Petition Sub-committee and approved up to \$45,000 in funding to have legal counsel explore the legal practicality of an initiative petition to address the scope of practice issue; if determined practical, draft appropriate language for the petition; and proceed with polling of the general public.
- Approved the nomination of Johnny Roy,

MD as Associate Editor of the Journal with term ending in April 2000.

- Accepted the recommendation of the Council on Professional & Public Relations that an Information Systems Technologist position be created at the OSMA.
- Approved the 1999 Seminars as presented by the Council on Member Services.
- Approved a motion requesting Jay A. Gregory, MD, investigate the feasibility of the OSMA joining with the AMA in a dues reduction program for our members.
- Approved the Life Membership applications for the following:  
Ronald C. Boden, MD, Tulsa  
Kenneth E. Bohan, MD, Oklahoma City  
George B. Carter, MD, Edmond  
A. Paul Compton, MD, Broken Arrow  
Leon N. Gilbert, MD, Bethany  
A.V. Leslie Hill, MD, Tulsa  
Bartis M. Kent, MD, Muskogee  
Fay Knickerbocker, MD, Edmond  
Harold A. Masters, MD, Oklahoma City  
H. Ruth Mershon, MD, Oklahoma City  
Hugh Perry, MD, Tulsa
- Approved the Special Membership applications for the following:  
F. Allen Bowers, MD, Oklahoma City  
Patrick K. C. Chun, MD, Lawton  
Stanford L. Kusch, MD,  
Enid (Bend, OR)  
William T. Morris, MD, Woodward  
Roger Quinn, MD, Oklahoma City  
Gene R. Smith, Jr., MD, Stillwater  
Harry B. Tate, MD, Ponca City  
Larry Weidner, MD, Edmond

#### At the special meeting of Board in Oklahoma City and by teleconference on December 29, 1998, the Board:

- Seated Ed L. Calhoon, MD, Alternate Trustee, as Trustee from District IV on the resignation of John Leatherman, MD who has moved from that District.
- Accepted the recommendations of the OCVO Advisory Board and:
  - 1) approved the OCVO Purchase and Sales Agreement as presented;
  - 2) approved the LLC Management Plan and Operating Agreement with the additions and corrections to the Operating Agreement outlined by OSMA Legal Counsel;
  - 3) approved the Marketing and Business Plan with one editorial deletion; and
  - 4) approved the transfer of \$100,000 to OCVO within the first five working days of January, 1999.
- Approved the 1999 revised budget which will be presented to the House of Delegates for approval at the 1999 OSMA Annual Meeting.

**At its January 17, 1999, meeting, the Board:**

- Approved the nomination of Kent King, MD as Alternate Trustee for District XIII.
- Approved the nominations of:
  - 1) John Bozalis, MD for the Wyeth Ayerst Award for Community Service, and
  - 2) Bobby Murcer for the Don J. Blair Friend of Medicine Award.
- Approved the recommendation from the Executive Committee to work with the AMA on the development of enhanced benefit programs to strengthen the relationship between the AMA and unified states and to accept the AMA proposal for a 20 percent dues reduction for 1999 and a \$100 rebate to the OSMA for every new AMA member.
- Accepted the recommendation from the Long Range Planning & Development Council to change the Chairman of the Council from the Immediate Past President to the President-Elect with the Immediate Past President serving as Vice Chairman and referred this to the Constitution & Bylaws Committee.
- Approved the report of the Secretary-Treasurer and the OSMA Financial Report as presented to December 31, 1998. Dr. Imes reported that the OSMA ended the year with over \$300,000 in revenue over expenses and that expenses overall were within budget for calendar year 1998.
- Approved a motion to allow Jay Gregory, MD, to distribute comments from the OSMA Member Survey pertaining to the AMA to the OSMA/AMA Delegates for their information when attending county medical society meetings.
- Accepted a recommendation from the Council on Public and Mental Health that the OSMA become a member of the Oklahoma Stroke Coalition.
- Following an in-depth and spirited presentation by Gordon Deckert, MD, accepted a recommendation from the Council on Public & Mental Health to create an OSMA Task Force charged with the development of a content plan with appropriate initiative to educate and improve the health of the people of the State of Oklahoma.
- Adopted a motion to accept the AMA guidelines regarding use of Tobacco Legislation monies coming to the state as the OSMA position.
- Accepted the recommendations of the Ad Hoc Committee on Loss of License to utilize a standing committee, either a newly created committee or the Medical

Ethics Committee with expanded jurisdiction, to mentor, track, and evaluate physicians if found guilty or convicted status.

- Accepted the recommendations of the Ad Hoc Committee on Partial Birth Abortion that the OSMA continue its support of the position of the AMA, the Oklahoma State Legislature and the U.S. Congress in opposing the performance of the procedure.
- Regarding Trustee re-districting of Rural Trustee Districts:
  - 1) accepted the recommendation of the Council on Rural Health on Trustee re-districting and forwarded the recommendation to the Constitution & Bylaws Committee; and,
  - 2) approved a motion to forward the recommendations to the county medical societies for their comments.
- Approved the Life Membership applications for the following:

Ernest William Allen, MD,  
Pagosa Springs, CO  
Marcus Barker, MD, Oklahoma City  
James Cochran, MD, Bartlesville  
Richard Dotter, MD, Edmond  
Everett R. Dunlap, MD, Broken Arrow  
Roy Fielding, MD, Tulsa  
Walter H. Gary, MD, Tulsa  
Gregory A. Green, MD, Tulsa  
Bernard E. Guenther, MD, Grove  
Kenneth C. Hoffman, MD, Tulsa  
Philip J. Maguire, Oklahoma City  
Leo Meece, MD, Woodward  
Dwane B. Minor, MD, Tulsa  
Alexander D. Raptou, MD, Tulsa  
C. T. Thompson, MD, Tulsa  
Robert G. Tompkins, MD, Tulsa  
S. Fulton Tompkins, MD,  
Oklahoma City  
Frank Tull, MD, Muskogee  
John E. Ward, MD, Oklahoma City  
O. Alton Watson, MD, Oklahoma City  
William J. Williams, MD, Bethany
- Approved Special Membership applications for the following:

James P. Cobb, MD, Norman  
Robert W. Daniels, MD, Midwest City  
William D. Hawley, MD,  
Oklahoma City  
Brian Po-Wen Hung, MD, Lindsay  
Fred Loper, MD, Oklahoma City  
David Rogers, MD, Edmond  
Kim K. Zarintash, MD, Tulsa  
Gale Kimball, MD, Oklahoma City  
R. Wayne Neal, MD, Tulsa  
Donald R. Pfeifer, MD, Tulsa  
Mary Saddoris, MD, Tulsa  
Phil Synar, MD, Muskogee

**Comments**

The transfer of ownership of the Oklahoma Centralized Verification Organization (OCVO) to the OSMA occupied a significant portion of your Board's time and energy. The commitment, dedication, and expertise of the members of the committees assigned the task of bringing about not only the transfer of ownership but also the successful transition of the OCVO into an OSMA enterprise were exceptional. Due special appreciation are the OCVO Task Force chaired by Ray Cornelison, MD; the OCVO Transition Committee headed by C. Wallace (Wally) Hooser, MD; and the OCVO Advisory Board and its chair, J. Christopher Carey, MD.

With the establishment by your Board of an OSMA Task Force to address the state, more appropriately, the sad state of the health of Oklahoma, the OSMA is embarking on a far-reaching endeavor which will utilize all the resources and varied expertise of our organization as well as require the support of all its members. The project emphasizes the profound commitment of the OSMA to the health and welfare of the people of Oklahoma. Under the able leadership of Robert Weedn, MD, Chair, Sara DePersio, MD, Vice-Chair, and spokesperson, Gordon Deckert, MD, the Task Force hit the ground running with a media briefing on March 3, 1999, at the State Capitol.

Above are highlights of two of the many, too many to individually enumerate, activities of our Association. Participation in the Coalition for Quality Patient Care, formed to address the issue of peer review confidentiality, and the many activities of our Association's Councils and Committees confirm and attest to the OSMA dedication to supporting Oklahoma physicians and to quality medical care in our state. The Oklahoma State Medical Association continues to grow; it is an organization in which we, Oklahoma Physicians, can justifiably take great pride.

Respectfully submitted,  
David S. Russell, MD  
Chair, Board of Trustees

## ■ OSMA SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES

### ADOPTED

Reference Committee: I (A-99)

Subject: Annual Report

Presented by: David S. Russell, MD,  
Chairman

Referred to: Reference Committee I

The Board of Trustees met at its Annual Meeting yesterday, April 15, 1999, at 1 p.m. at the Southern Hills Marriott, Tulsa. This Supplemental Report reviews actions taken by the Board during the meeting. The Report will be referred to Reference Committee I for consideration, along with the Annual Report of the Board of Trustees, which is in the Delegates' handbook.

The Chairman reviewed for the Board's information items referred from the House of Delegates 1998 Annual Meeting for Board review and action. Two items remain in progress:

- 1) The resolution concerning development of standard forms for all HMOs and insurance companies has been referred to the Council on Medical Services.
- 2) The recommendation from the Constitution & Bylaws Committee to change the number of physicians per Trustee from 500 to 400 was referred for additional study in light of the potential increase in membership from Osteopathic Physician participation. This impact on total membership remains under evaluation; pending this determination, appropriate action will be taken by the Board.

- Approved the report of the Secretary-Treasurer for the year ending December 31, 1998, and for calendar year 1999 to February 28.

- Approved a motion to file with the 10th Circuit Court of Appeals an amicus curiae brief supporting the appeal of a physician convicted of involuntary manslaughter. The Board clearly articulated that the decision to file the amicus brief did not constitute agreement with the treatment rendered, but was to register strong disagreement with the principle of criminalization of medical judgement.

- Accepted the recommendation of the Council on Medical Services to support the efforts of the emergency medicine physicians by providing OSMA representation, through the Council on Medical Services, on the Emergency Medicine Board.

- Accepted the recommendations of the OSMA *Journal* to:

- 1) appoint J. Michael Pontious, MD to a three-year term as Editor, and
- 2) appoint Dr. Pontious Editor-in-Chief of the *Journal*
- 3) approve the appointment as Associate Editors for one year terms for:  
J. Michael McGee, MD  
Ruth H. Oneson, MD  
Johnny B. Roy, MD  
David M. Selby, MD  
Clifford G. Wlodaver, MD
- 4) raise *Journal* advertising 10 percent beginning in 2000.
- 5) raise non-member subscription rates \$30 to \$45 yearly.
- 6) list OMPAC members in the *Journal* three times per year at no cost to OMPAC.
- 7) continue stipends at the current rate of \$500/mo. for the Editor-in-Chief and \$200/year for Editors.

Ray V. McIntyre, MD, was recognized for his many years of dedication and commitment to the *Journal* as Editor-in-Chief. The board expressed its appreciation and lauded Dr. McIntyre for his many achievements and for bringing the *Journal* to its current level of scientific excellence.

- Approved the recommendation of the "Physicians' Campaign for a Healthier Oklahoma" Task Force (PCHO) to authorize the further development and implementation of the Task Force plan.

- Approved the Life Memberships of the following physicians:

Bill E. Blevins, MD, Midwest City  
Jerry L. Bressie, MD, Oklahoma City  
John B. Bush, MD, Oklahoma City  
William R. Cleaver, MD,  
Oklahoma City

Terrell Covington, MD, Tulsa  
Gravelly E. Finley, MD,  
Oklahoma City

William J. Forrest, MD, Oklahoma City  
Ronald F. Gates, MD, Oklahoma City  
Jack L. Gregston, MD, Oklahoma City  
George Guthrey, MD, Oklahoma City  
Harold W. Houk, MD, Oklahoma City  
George H. Kamp, MD, Oklahoma City  
Robert J. Keim, MD, Oklahoma City  
B. Anthony Lynn, MD, Bartlesville  
Robert C. MacKay, MD,  
Kerrville, Texas

Fred R. Martin, MD, Tulsa  
Joseph L. McDonald, MD, Tulsa  
Ellis Oster, MD, Ponca City  
Marcelo Puiggari, MD, Edmond  
G. Edward Shissler, MD, Edmond  
Luther J. Strickland, MD,  
Oklahoma City

William G. Thurman, MD, New York

Charles A. Tollett, MD, Oklahoma City

- Approved Special Membership applications for the following:

Mira Bhatia, MD, Sugarland, Texas  
James D. Brashear, MD, Norman  
William R. Bullock, MD,  
Oklahoma City  
Mary Apple Frow, MD, Oklahoma City  
Jerry R. Hordinsky, MD,  
Oklahoma City  
Jone Kendrick, MD, Norman  
Alice McInnis, MD, Oklahoma City  
Douglas L. Polk, MD, Oklahoma City  
Malcolm Robinson, MD,  
Oklahoma City  
William C. Stone, MD, Tulsa  
Thomas R. Coughlin, MD, Tulsa  
Ruth Crumley, MD, Tulsa  
A. Munson Fuller, MD, Tulsa  
Robert E. Hudson, MD, Tulsa  
Joe B. Jarman, Jr., MD, Enid  
Wayne B. Lockwood, MD,  
Oklahoma City  
Don Mace, MD, Shawnee  
David O. Merifield, MD, Tulsa  
Linda L. Nassif, MD, Tulsa

- Approved for referral to the House of Delegates, the following late resolutions:

- 1) Late Resolution 20 - Folic Acid for the Prevention of Neural Tube Defects
- 2) Late Resolution 21 - AARP-HHS
- 3) Late Resolution 22 - Youth Suicide Task Force

The Board elected by acclamation David S. Russell, MD Chairman and C. Wallace Hooser, MD Vice Chairman of the OSMA Board of Trustees.

Respectfully submitted:  
David S. Russell, MD  
Chairman, Board of Trustees

## ■ REPORT OF THE COUNCIL ON PLANNING AND DEVELOPMENT

### ADOPTED

Reference Committee: I (A-99)

Subject: Annual Report

Presented by: David M. Selby, MD, Chair

Referred to: Reference Committee I

### Introduction

The Council on Planning and Development met twice during the 1998-99 Association Year: on October 17, 1998, and again on January 16, 1999. These meetings were held the day before the scheduled meetings of the OSMA Board of Trustees and were held at the OSMA Headquarters in Oklahoma City.

The Council is comprised of the following OSMA members: President; President-elect; Vice President; Secretary-Treasurer; Speaker; Vice Speaker; Chair of the Board; Vice Chair of the Board; all Council Chairs and AMA Delegates/Alternate Delegates.

At the October 17 meeting, Dr. Selby and Dr. Mary Anne McCaffree, OSMA President, welcomed Council participants and addressed the principle purpose of the meeting: to review and update the current OSMA goals and initiatives. Gary M. Richetto, PhD, President, Triad Associates Inc., Tulsa, was present to facilitate the meeting. He divided attendees, including OSMA staff, into seven groups to match the current seven OSMA goals. Each group met separately to thoroughly review their respective goals and corresponding initiatives. Goal leaders for each group then reported back to the full Council regarding their recommendations for revisions, additions, deletions, etc., **Attachment I** is a revised version of the OSMA Goals/Initiatives.

At the January 16 meeting, Dr. Richetto thoroughly briefed the Council on the results of the OSMA Membership Survey, which was completed November 1998 (**Attachment II**). Following Dr. Richetto's presentation, which included Council discussion, the Council again split into groups to re-visit the OSMA Goals/Initiatives to determine if any changes were necessary based on the survey findings. Attachment I includes revisions made by the Council on January 16.

### Recommendations

That the House of Delegates approve the revised OSMA Goals and Initiatives provided in this report.

### Conclusion

The results of the OSMA Membership Survey are significant and in many ways reinforce our mission and goals. I strongly encourage each of you to read the summary of the survey and the actual survey itself. All OSMA councils and committees will be reviewing and analyzing the survey results as they shape their programmatic efforts during the coming year.

Respectfully submitted,  
David M. Selby, MD, Chair

## ATTACHMENT I

### Oklahoma State Medical Association Goals and Initiatives

#### Goal 1:

#### Assume a more active and visible role in promoting and improving health education.

- 1.1 Council on Public & Mental Health to target issues for OSMA active support.
- 1.2 Utilize press releases, internal publications and other vehicles to provide health information to physicians and the general public.
- 1.3 Encourage MDs to promote public health and preventive medicine in their own offices and private practice with literature, pamphlets and personal contact.
- 1.4 Work with the leadership of medical schools to ensure preventive medicine is included in curriculums and throughout medical training programs.
- 1.5 Partner with the Alliance in promoting public health initiatives.
- 1.6 Work toward expansion of the OCMS "Schools for Healthy Lifestyles" to the rest of the state.
- 1.7 Support the Board-appointed Task Force in the development of a comprehensive plan for a broad-based health initiative to improve the health of all Oklahomans.
- 1.8 Continue OSMA/Alliance involvement and leadership in public health community partnerships.
- 1.9 Develop an ongoing TV and radio program.
- 1.10 Continue to publicize the need for immunizations for adults and children.
- 1.11 Increase active and retired physician participation on State Boards and Councils through the legislative process.
- 1.12 Seek ways to publicly position physicians as the best source of medical information.

#### Goal 2:

#### Increase physician membership and participation in OSMA

- 2.1 Improve communication with the membership regarding OSMA and AMA activities.

- 2.2 Continue support of unified membership status.
- 2.3 Listen to OSMA non-members with regard to reasons for non-membership.
  - Develop a non-member survey regarding items such as dues, etc.
  - Activate the Committee on Membership Development.
  - Develop a periodic letter outlining the benefits of membership and include in the Journal/Newsletter/Legislative Updates
  - Explore decreased dues for Students, Residents and first year Practicing Physicians.
- 2.4 Invite physicians individually to participate in Councils, Committees, etc. (especially physicians who are 35-50 years of age.)
  - Inform entire membership of the Council/Committees available - recruit yearly. Review all Council/Committees yearly to be sure all are representative of the membership.
- 2.5 Promote the benefits of participation in organized medicine.
  - See 2.3 and 2.6.
  - Make information available through electronic mail to encourage younger membership participation.
- 2.6 OSMA information should go to all members not just 250 and develop a fax tree.
  - Continue sending the Week in Review to OSMA Leadership and develop a one page OSMA update to all OSMA members and fax bimonthly (written by Executive Director).
- 2.7 Increase the number of Board of Trustee Meetings to five - following the schedule below:  
~~January~~ February  
 April  
 May - approximately one month following Annual Meeting  
 August  
 November
- 2.8 Promote DO participation - Officers, Councils, Committees.
- 2.9 Develop an Officer/Trustee/Council/Committee Chair Orientation Session.

- 2.10 Look into ways to increase interest in and attendance at OSMA Annual Meeting.

**Goal 3:  
Increase participation in legislative and regulatory processes.**

- 3.1 Increase grassroots involvement between physicians and legislators.
- Notify OSMA membership of their elected officials (State Representative and Senator) and provide telephone numbers of officials to OSMA members.
  - Increase efforts to involve Students Residents in the legislative process.
- 3.2 Promote the "Doctor of the Day" (DOD) to the membership.
- pager for "DOD"
  - Develop a "key contact" physician program for each legislator.
  - Attempt to secure pharmaceutical donations from drug manufacturers and or pharmacists.
  - Promote an annual "Medicine Day" at the Capitol.
- 3.3 Continue to enhance the Council on State Legislation and Regulation.
- Increase involvement of rural physicians.
- 3.4 Continue to develop an annual legislative agenda.
- 3.5 Continually upgrade technology to increase efficiency of legislation and political programs.
- 3.6 Add full-time and contract staff as necessary (and within budget) to support legislative monitoring efforts.
- 3.7 Increase the number of individual contributors to OMPAC and AMPAC.
- Increase the number of physicians willing to host legislative fundraisers.
  - Increase the number of OMPAC contributors to 20% of the membership by the year 2010.

**Goal 4:  
Assist OSMA member physicians in their dealings with managed care entities.**

- 4.1 Remove any impediments to open discussion with patients regarding treatment options.
- 4.2 Actively promote legislation that would require Managed Care Plans

to include and utilize organized medical staff structures for OSMA member physicians participating in managed care plans.

- 4.3 Support present physician-owned managed care organizations.
- 4.4 Establish a clearinghouse for managed care decisions and complaints.
- 4.5 Utilize the Ad Hoc Committee on HMO Medical Directors as a forum to promote quality of care standards for managed care.
- 4.6 Promote "due process" for physicians in dealing with managed care organizations.
- 4.7 Actively support a standardized credentialing process for managed care organizations.
- 4.8 Seek to require treatment and/or evaluation decisions to be made by Oklahoma-licensed MDs/DOs in PPOs.
- 4.9 Support OSMA member physicians in their dealings with Medicare and HCFA.
- 4.10 Support OSMA member physicians with education and communications regarding Federal Regulations, Coding, Fraud & Abuse, etc.

**Goal 5:  
Increase the unity and collegiality of the medical profession.**

- 5.1 Promote civility among physicians, even in disagreements.
- 5.2 Convince physicians that OSMA is the only organization in the state that crosses all lines to unify physicians.
- Increase efforts with urban physicians.
  - Increase communication regarding importance of OSMA as single unifying entity (and member benefits).
- 5.3 Have OSMA act as a neutral source and find systematic ways of dealing with differences of opinion.
- Continue current process whereby large county medical societies deal with local grievances; others are referred to OSMA for mediation
- 5.4 Explore avenues to reinstate physician courtesy for services rendered.
- Review existing laws and regulations.
- 5.5 Improve communication with OSMA members, specialty societies, etc. through

- Public relations and better internal communication.
- Develop and orientation program for new Board members.
- Mentor new physician members.

- 5.6 Serve as a mediator for information from physician groups regarding complicated issues. Continue to obtain input of all members.
- 5.7 Utilize CME activities whenever possible to increase unity and collegiality in the medical profession.
- 5.8 Reach out to the membership through information technology.
- 5.9 Work toward future development of a hot-line or e-mail chat room for medical office problems and for clinical medical problems or discussions.

**Goal 6:  
Improve and enhance organizational effectiveness and membership services.**

- 6.1 Continue to support and promote PLICO services.
- 6.2 Promote, enhance, and expand OCVO services/products.
- 6.3 Promote CME in all disciplines.
- 6.4 Continue to promote the availability of medical practice enhancement programs through educational seminars.
- 6.5 Develop a comprehensive membership recruitment program.
- 6.6 Improve communications; coordinate activities and available services between county and state societies.
- 6.7 Continually evaluate OSMA governance structure; i.e. protocols, constitution and bylaws, etc.
- 6.8 Conduct a periodic "needs survey" of the membership.

**Goal 7:  
Communicate more effectively and efficiently with OSMA membership, patients, and the people of Oklahoma.**

- 7.1 Utilize new technology (blast fax, e-mail, internet) to improve interactive communication.
- Enhance Internet website.
  - Enhance physician use and awareness of computer technology.
  - Incorporate MIS technology through addition of staff or contract services.
- 7.2 Public Relations.

- Evaluate most effective method of accomplishing goals related to Public Relations.

- Seek most efficient use of resources and return on investment.

- Evaluate current Public Relations efforts.

- Initiate press releases to communicate major activities to the media.

7.3 Integrate the Alliance as an equal partner in all OSMA activities.

7.4 Speakers Bureau.

- Continue development of a physician speakers bureau with input from the county medical and specialty societies.

## ATTACHMENT II

### OSMA Membership Survey Conducted by the Long-Range Planning Council: A Report to the OSMA House of Delegates

Prepared by  
Triad Associates, Inc.  
Tulsa, Oklahoma

#### Introduction and Background

In the Fall of 1997, Gary Richetto, President of Triad Associates, was engaged by OSMA's Council on Planning and Development (hereafter "Council") to facilitate a series of strategic planning sessions at the Association's headquarters in Oklahoma City.

Using a "Strategic Framework" facilitation process and format pioneered by the Corporate Performance Group in Tulsa, the Council produced a Mission Statement, Vision, Goals and Strategic Initiatives to guide the Association for the next three to five years.

As part of its on-going strategic planning process, the Council reviewed OSMA's goals and strategic initiatives in the summer of 1998. In addition to updating the Council's earlier work, the decision was made to survey the OSMA membership later that year in the effort to further ensure that the Association's goals and strategic initiatives were indeed reflective of the needs and views of members. Triad Associates was asked to assist in the development and analysis of the survey.

Upon completion of the survey and analysis of results, the Council met again in January, 1999 to discuss survey findings and to re-examine the Association's goals and strategic initiatives in light of these results.

A listing of OSMA's seven goals and 60

strategic initiatives are included elsewhere in the Council's Annual Report to The House of Delegates.

As the reader will note, these goals and initiatives complement the results of the Membership Survey, highlights of which are discussed later in this report. The important point to be made here is that, rather than planning in a "vacuum," the goals and initiatives devised and refined by the Council have been based on valid data gained through perhaps the most comprehensive survey of membership views ever conducted.

#### Survey Development

Much like the Council's Strategic Framework of mission, goals and initiatives, the Membership Survey was developed through stages to ensure its validity, relevance and contribution to future Council planning efforts:

- Triad Associates consultants met with OSMA Staff to identify major areas of inquiry.

- OSMA Council Chairs were solicited for survey topics and questions.

- The Oklahoma State Department of Health was invited to offer questions for inclusion in the survey.

- Membership surveys of other state medical associations were reviewed for content and format ideas.

- Early drafts of the survey were reviewed by staff and member physicians.

- Physician volunteer(s) completed a near-final draft of the survey to ascertain time required for completion.

After these meetings and preliminary research, the final survey was constructed. Comprehensive in design, the survey included 188 individual response options within eight broad categories. The categories included:

- Background Information
- OSMA Governance/Representation
- Communications and Publications
- Public Health
- Association Programs
- Continuing Medical Education
- Member Services
- General Satisfaction

In addition to these quantitative data, the survey also afforded members the opportunity to provide written commentary as they desired. A total of 154 written comments were received which OSMA staff content analyzed and grouped into the following subject areas:

- General Comments
- Positive Comments
- Negative Comments
- Legislative Comments
- Comments on OMPAC
- Survey Comments
- Comments Regarding Unified AMA Membership
- Comments from Retired Physicians

#### Summary of Survey Results

Some 5,000 surveys were sent to the OSMA membership, of which 873 were completed and returned, representing over a 17% response rate. This response rate is considered excellent for a mail-out survey and is particularly impressive when one considers its comprehensive nature. (In fact, the survey's length and depth received some commentary from members which should be taken into account in future surveys.)

The remainder of this report highlights survey results in each of the eight question categories. First, the general findings and their implications are briefly discussed, then examples of specific responses are reported to provide further insight into the findings.

#### Background Information

In large measure, OSMA members completing the survey are reflective of Oklahoma's physician population. The majority of respondents (59%) are between the ages of 36 and 60; a significant minority of respondents (23%) are over 65 years of age; and the remaining respondents are under age 35 (9%) or between the ages of 61 and 65 (9%).

In terms of gender and race, 89% of respondents are male and 11% are female. Caucasians compose 84% of respondents, while African-Americans are 1%, Asians are 6%, Hispanics are 2%, Native Americans are 3%; and 4% of respondents describe themselves as "Other."

The majority of physicians are in metropolitan practice settings (39% in Oklahoma City; 23% in Tulsa). Approximately one-third of members practice in a medium-size city (17%) or small city/town (17%). The remaining 4% of respondents practice in a rural setting.

Two-thirds of respondents practice as a private individual (35%) or as a member of a private group (31%). The next largest response groups are composed of physicians who described their type of practice as employed-group (10%) or employed-medical school (7%).

Regarding membership in a specialty society, 21% of respondents belong to a local society, 55% belong to a state society, and 75% belong to a national society.

### Board Governance/Representation

OSMA's **Goal 2** and its ten supporting initiatives focus on increasing members participation in OSMA. This goal and these initiatives seem particularly important in light of survey findings. While OSMA's governance structure and activity are viewed positively, members do not view the governing bodies as representative of the general membership and feel somewhat estranged from the decision-making process.

The large majority of respondents are not active in OSMA governance. Specifically, 9% are delegates; 2% are board members; 4% are (trustee) alternates; and 4% are members of an OSMA council or committee.

Within this survey category, six questions were asked to assess Members' satisfaction with OSMA's governance structure; policy development process; effectiveness in promoting and representing the practice of medicine; and representation of members and their views in decisions.

The findings in this category reveal largely favorable member views in terms of OSMA's governance structure, management, and ability to promote a favorable environment for medical practice in the state. However, members' views are mixed regarding OSMA's effectiveness in representing the profession's interests to state government, as well as the House of Delegates Board of Trustees' being representative of the general membership. And, members' views are largely negative in terms of their own views and opinions having influence in OSMA decision-making. Specific positive and negative response percentages in these areas are shown.

| Board/Governance Representation          |            |            |
|--|------------|------------|
|  | % Negative | % Positive |
| OSMA effectiveness in management         | 25         | 75         |
| Governance structure fair, democratic    | 25         | 75         |
| Policies promote favorable environment   | 30         | 70         |
| Represents interests to State Government | 41         | 59         |
| House/Board representative of membership | 40         | 59         |
| Your views influence decision-making     | 70         | 30         |

### Communications and Publications

Goal 7 is the Association's "communication" goal, addressing communication with members, patients, and the public. Given the activity level of OSMA staff in this area, a large number of survey questions were devoted to assessing members' views of OSMA's public relations and printed materials, as well as exploring their preferred channels of communication, storage and processing of information, and use of computers.

### Preferred Channels of Communication

Of the seven communication channels surveyed, respondents indicate that direct mail is the most effective channel for communicating with them (91%). The second most preferred channel is the OSMA Newsletter (78%), and the third most preferred channel is the OSMA Journal (61%). Contact by fax machine is deemed effective by 52% of members, while 40% believe communication through county society programs is effective. Some 29% of respondents cite using the OSMA website/e-mail, while only 18% deem OSMA annual meeting exhibits effective.

### OSMA Public Relations

Generally speaking, members are not satisfied with the aggressiveness and visibility of OSMA public relations efforts. On the other hand, despite these negative views, the majority of members support greater investments in public relations and are in favor of the formation of an OSMA physician/speakers bureau (although over half of them would not be willing to serve as a speaker). Specifically, questions regarding public relations yielded the following results:

| OSMA Public Relations                          |            |            |
|--|------------|------------|
|  | % Negative | % Positive |
| Satisfaction with PR aggressiveness            | 59         | 41         |
| Satisfaction with PR visibility (in your area) | 77         | 23         |
| Support greater investment in PR               | 35         | 65         |
| Support forming physician/speakers bureau      | 33         | 67         |
| Willingness to be physician/speaker            | 56         | 44         |

### OSMA Publications and Website

Each of the Association's publications were explored to determine Members' over-all satisfaction with quality and content, as well as the extent to which they find it useful and feel its contents should be expanded. As noted below, the *OSMA Directory of Physicians* received the greatest favorable review in terms of both quality and usefulness. While not as favorable, the OSMA Newsletter and OSMA Journal received positive responses from large majorities of members. In contrast, the OSMA Website received negative responses in all three categories. The following table presents negative and positive response percentages for all three publications and the website:

| OSMA Publications and Website         |            |            |
|---------------------------------------|------------|------------|
|                                       | % Negative | % Positive |
| Satisfaction with quality and content |            |            |
| OSMA Directory of Physicians          | 10         | 90         |
| OSMA Newsletter                       | 23         | 77         |
| OSMA Journal                          | 32         | 68         |
| OSMA Website                          | 72         | 28         |
| Extent to which it is useful          |            |            |
| OSMA Directory of Physicians          | 15         | 85         |
| OSMA Newsletter                       | 30         | 70         |
| OSMA Journal                          | 45         | 55         |
| OSMA Website                          | 80         | 20         |
| Contents should be expanded           |            |            |
| OSMA Directory of Physicians          | 40         | 60         |
| OSMA Newsletter                       | 46         | 54         |
| OSMA Journal                          | 45         | 55         |
| OSMA Website                          | 62         | 38         |

### Information Gathering, Storing, Retrieving, Analysis

Respondents were asked to what extent they used six specific methods for data gathering and utilization including: personal discussion, reading, outside information services, computer databases, the Internet, and e-mail. Reading (94%) and personal discussion (85%)

are the overwhelming means used by members, while 52% use outside information services. A bit over one-third of respondents (35%) use the Internet and 33% use computer data-bases. The smallest number of members (23%) report using e-mail for these purposes.

### Computer Usage

Among the strategic initiatives supporting OSMA's **Goal 7**, dealing with communication, "is enhancing physician usage of the Internet and computer technology." As the finding discussed below reflect, this initiative will require significant investment in its "educational" component. Specifically, while the majority of members use a computer, its use as a communication tool is far overshadowed by its use as an information tool.

OSMA members were asked if they used computers and, if so, the manner in which they used them. The large majority of members (79%) do use a computer, while 21% do not. When asked the extent to which they used a computer in nine categories of usage, the majority of members report their use is both personal (72%), as well as in their practice (69%). Their use within these two categories is primarily educational (50%) or business or financially-driven with 46% using the computer for personal finances/investments, and 44% using the computer for practice financial information.

Additionally, 43% of respondents use the computer for obtaining medical information from Internet sites, the AMA, and National specialty societies. A clear minority of members (18%) use their computers to communicate with fellow physicians, while a very small minority of 4% report computer communication with patients.

### Public Health Oklahoma State

#### Department of Health

During the development of this member survey, OSMA contacted the Oklahoma State Department of Health (OSDH), which requested strong interest in providing several questions to be included to determine the preferred means of OSDH communication with OSMA members. Findings here very much paralleled those cited earlier in the **Communications/Publications** segment of this report. Essentially, members have not accessed the OSDH Website (97%); 73% are not interested in online publications and 65% do not wish to access the website for information on public health concerns. Somewhat in contrast, a significant minority (42%) would like to receive notification of public health alerts in their county through e-mail.

Again reflecting views similar to those provided to OSMA communication questions, members prefer to be informed about public health issues through direct mailings (79%) or the OSDH Newsletter (65%).

### Public Health Issues

OSMA's **Goal 1**, dealing with health education, includes initiatives to partner with the Alliance in promoting public health efforts and providing leadership in community partnerships.

To provide further guidance in pursuing these initiatives, members were asked the extent to which OSMA should be proactive in nine public health issues: accident/injury prevention; aging/end of life care; alcohol/substance abuse; family violence; patient safety; perinatal care; preventive care; sexually transmitted diseases; and tobacco issues. Members' response to these issues was overwhelmingly supportive of pursuing them. While preventive care received the greatest favorable response (89%), even the least supported initiative (accident/injury prevention) is endorsed by 77% of members. Ranked in order of favorable response, OSMA members feel the Association should plan a proactive role in:

|                                |     |
|--------------------------------|-----|
| Preventive care:               | 89% |
| Alcohol/substance abuse:       | 84% |
| Sexually transmitted diseases: | 83% |
| Aging/end of life care:        | 81% |
| Perinatal care:                | 81% |
| Patient safety:                | 80% |
| Tobacco issues:                | 80% |
| Family violence:               | 78% |
| Accident/injury prevention:    | 77% |

For members who have chosen **not** to participate in Medicaid managed care, the survey queried them to determine the extent to which their decision was influenced by one or more of four factors. Findings here were:

|   |        |
|---|--------|
| Too much paperwork                                  | (86%); |
| Low reimbursement/capitation                        | (84%); |
| Problems with patient assignments;                  | (71%)  |
| And difficulty in ascertaining patient eligibility. | (69%)  |

Finally, members were surveyed to determine their interest in becoming involved in four community health initiatives and to report the hours per month they provided volunteer professional services to patients and/or their communities. While 43% of members are interested in public schools involvement and 35% are interested in youth groups, only 24% are interested

in becoming involved in child care and 23% are likewise interested in HeadStart.

In terms of volunteering professional hours, the following table reflects members' activity:

| Volunteer Hours Per Month (% responses) |            |
|---|------------|
| 0 (15%)                                 | 1-10 (59%) |
| 11-20 (17%)                             | 21-30 (5%) |
| 31-40 (2%)                              | >40 (2%)   |

### Association Programs

OSMA's **Goal 6** addresses the improvement and enhancement of membership services. In the effort to ensure that the eight initiatives supporting this goal are on target, members were asked to provide feedback regarding a variety of issues including Association investment of time and resources and the perceived effectiveness of present programs.

Regarding the investment of resources, members feel OSMA should concentrate most on legislative representation and continuing medical education. However, here as in the area of public health, the majority of members support OSMA's further investment in essentially all the program areas presented to them with the exception of legal services. The following table ranks the program areas and indicates the percentage of members who feel resources should be invested here:

|                                |     |
|--------------------------------|-----|
| Legislative Representation:    | 88% |
| Continuing Medical Education:  | 74% |
| Socio-medical Economics:       | 66% |
| Public Health:                 | 64% |
| Publications/Communications:   | 63% |
| Member Benefits/Other Support: | 61% |
| Legal Services:                | 48% |

Members provided feedback on the extent to which OSMA is performing effectively in each of these program areas. The area of best perceived performance is legislative representation (57% favorable), while the areas of lowest effectiveness are legal services (41% favorable) and socio-medical economics (40% favorable).

### Legislative Representation

OSMA's **Goal 3** specifically addresses participation in both legislative and regulatory processes. Members were asked to reflect the importance of OSMA advocacy at both the State and Federal legislative levels, as well as their individual interest and activity. Findings here clearly demonstrate the membership's desire to have OSMA play a strong advocacy role, but just as clearly reflect modest individual activity and lack of interest in supporting the profession's political action committee. Specifically, 85% of

members feel OSMA's state advocacy is important; and OSMA federal advocacy is deemed important by 77% of members.

Regarding individual activity, a bit over half (52%) of members actively support political candidates with time or finances, and 35% are members of the Oklahoma Medical Political Action Committee (OMPAC).

### Socio-Medical Economics

The Association's **Goal 4** and its ten strategic initiatives are aimed at assisting members in dealings with managed care entities. As part of this survey, members were asked to identify those socio-medical economics issues with which OSMA could better assist them. The following table ranks each activity according to the percentage of members who desire greater assistance:

|                             |     |
|-----------------------------|-----|
| Reimbursement:              | 74% |
| Compliance Reviews Coding:  | 70% |
| Quality Standards:          | 69% |
| Evaluation Mgt. Guidelines: | 67% |
| Fraud and Abuse Issues:     | 65% |
| Contract Review:            | 61% |
| Claims Payment:             | 59% |
| Necessity Review:           | 58% |
| Sooner Care:                | 53% |

### OSMA Annual Meeting

Perhaps more than any other area of the survey, questions regarding OSMA's Annual Meeting reflect members relatively low interest in, and support for this program. Only 22% of members report regularly attending the meeting; only 15% attend OSMA policy sessions; less than one-third (31%) attend CME sessions, while 18% participate in social activities and 22% report visiting exhibits or vendor booths. OSMA's **Goal 5** is concerned with increasing unity and collegiality of the profession. It appears doubtful that the Annual Meeting serves as a forum for achieving this end when one considers that only 20% of members feel that OSMA should provide more social contact for themselves and/or their families in conjunction with the meeting.

### Continuing Medical Education

Another of the nine strategic initiatives supporting **Goal 5** addresses continuing medical education (CME) as a means of increasing physician unity and collegiality. Indeed survey results suggest that CME may provide such an avenue, since 65% of members feel OSMA should directly sponsor educational programs and seminars. Presently, members attain required CME credits primarily through national specialty

| General Satisfaction                        |               |
|---|---------------|
| Satisfaction With OSMA Overall Performance  | 72% favorable |
| Satisfaction With OSMA Cost-Value           | 52% favorable |
| Satisfaction With OSMA Responsiveness       | 62% favorable |
| Satisfaction With Value of OSMA Information | 64% favorable |
| Satisfaction With AMA Cost-Value            | 32% favorable |

societies (70%), specialty journals (52%) or a hospital (45%).

If OSMA were to offer more CME programming, members would prefer that sessions be held on Saturday mornings (58%), weekday evenings (47%), or Saturday afternoons (46%).

In terms CME subject areas, members were asked to report their interest in a series of both clinical and non-clinical programs. The following table shows the rankings and percentage of interest responses for the top-ranked programs cited by at least half the respondents:

### Clinical Programs:

General Medical (64%)  
Infectious Diseases (62%)  
Cardiovascular Diseases (62%)  
Cancer (59%)  
Preventive Medicine (56%)  
Stroke Prevention (50%)  
Geriatrics (50%)

### Non-Clinical Programs:

Fed/State Regs. (54%)  
Coding (53%)

### Member Services

OSMA's **Goal 6** and its eight initiatives address enhancing the Association's effectiveness and membership services. Thirty-one questions were posed in the areas of OSMA educational seminars, satisfaction with OSMA vendors, and OSMA potential future programs and products.

### OSMA Educational Seminars

Of nine potential seminar topics, only two were cited by at least half of respondents as those they would be willing to attend or have staff attend:

Insurance (coding/billing/reimbursement), selected by 58% of members and Computer Use and Technology, selected by 52%.

### OSMA Vendors

Members were asked to indicate their level of satisfaction with 14 OSMA vendors. Highest ranked vendors and percentage of members indicating satisfaction with them are:

|                           |               |
|---------------------------|---------------|
| Liability Insurance/PLICO | 91% favorable |
| Health Insurance/PLICO    | 77% favorable |
| Insurance C. L. Frates    | 72% favorable |

The lowest ranked vendors and percentage of members indicating satisfaction with them are:

|                         |               |
|-------------------------|---------------|
| Tax Consulting:         |               |
| Tax Resource            | 18% favorable |
| Collections: IC System  | 12% favorable |
| Auto Leasing: Auto Flex | 10% favorable |

### Other Member

#### Benefits/Support Services

Of the seven offerings listed in this segment of Member Services, including Financial Planning, Legal/Tax, Medical Office Supplies, Medical Computer Software, Medical Office Placement, Printing, and Answering/Paging Services, none is supported by more than half of the members. The highest response is for Medical Computer Software, with 49% favorable responses.

### General Satisfaction

By design, the final segment of this comprehensive survey addressed members over-all satisfaction with OSMA and with the cost-value satisfaction of AMA membership. Findings here clearly reflect the general membership's high degree of satisfaction with its State Medical Association. The table on this page reports the percentage of favorable responses to the five questions dealing with member satisfaction.

### Future Surveys and Strategic Planning

It is perhaps important to note that, while this survey was designed to be quite comprehensive in breadth and depth, future surveys of the OSMA membership need not be so. In other words, this survey has formed an "anchor point" from which future surveys of limited scope on specific topics or surveys aimed at specific sub-groups of the OSMA membership can be designed and conducted.

Moreover, the internal design of the present survey will enable OSMA Staff and or members of the Council on Planning and Development to further analyze the results

and thereby gain greater insight into members' needs and viewpoints. For example, should there be value in analyzing the information separately for sub-groups of the members (e.g., female physicians in private practice or retired physicians in small city/town practice settings), such analysis can be done.

Similarly, now that the Association has this broad database of findings, future surveys can follow up on specific topics, such as enhancing professional unity and collegiality or increasing membership activity in OSMA governance or committees/councils to measure the effects of programs aimed at strengthening these areas.

In closing, we wish to thank the Council on Planning and Development and the Oklahoma State Medical Association for the opportunity to work with them in this endeavor. It has indeed been a pleasure to work with staff and council leadership for the past few years in assisting one of our state's most important professional associations in the charting of its future.

Respectfully submitted,  
Gary M. Richetto, PhD  
TRIAD ASSOCIATES, INC.

## ■ REPORT OF THE CONSTITUTION AND BYLAWS COMMITTEE

ADOPTED AS AMENDED  
Presented by Constitution & Bylaws  
Committee  
Bruce L. Storms, MD, Chair

### Review of Activities:

The Constitution & Bylaws Committee submitted amendments to the OSMA bylaws at the 1998 House of Delegates meeting. The Constitution & Bylaws Committee met on February 17, 1999, to review the changes.

All amendments presented in writing at one annual meeting may be adopted only at a subsequent annual meeting. These changes may be amended by a two-thirds vote of the Delegates present and voting at any annual meeting.

Recommended second reading changes:

### Re-alignment of the *Journal* and Council changes

1. The Committee recommends changing the name of the Council on Professional and Public Relations to the Council on Public Relations and deleting the wording *inter-professional and intraprofessional*. The Committee also recommends forming a new Council named the Council on

Professional Communications and in that Council incorporating Chapter VIII (*Journal*).

Changes are noted on page:

|    |                       |
|----|-----------------------|
| 18 | lines 8-41            |
|    | deleting Chapter VIII |
| 18 | line 47               |
| 18 | line 49               |
| 20 | line 1                |
| 20 | lines 4-5             |
| 20 | line 32 adding and    |
| 21 | lines 39-48           |
| 22 | 1-29                  |

The Committee recommends deleting the AMA Alternate Delegates as members of the Long Range Planning & Development Council.

Page 19 line 23

The Committee recommends deleting the words, "and adjudication of disputes" from the Council on Member Services.

Page 19 lines 32, 33

The Committee recommends deleting words on page 20 lines 29, 30, 31, 32, and changing on page 20 line 32 programs to Institutions.

### 2. Amendment of Bylaws procedures

The OSMA House of Delegates made the following recommendations to the Amendment of Bylaws procedures:

These bylaws may be amended in two ways:

Amendments to the bylaws, after being presented to the Bylaws Committee and if passed by the Board of Trustees on or before the Board's winter meeting, will be presented to the House of Delegates, and if passed by a two thirds vote of the Delegates present and voting, will become effective at the close of the Annual Meeting at which it was passed. The proposed bylaw changes must be sent to the Delegates at least 45 days prior to the Annual Meeting. Only grammatical changes can be made to the proposed amendment without the amendment being referred back to the Bylaws Committee for review and subsequent referral to the OSMA House of Delegates for consideration.

2. Proposed bylaw changes not presented at or before the winter Board of Trustees meeting may be presented in writing at one Annual Meeting and may be adopted only at a subsequent Annual Meeting by a two thirds vote of the Delegates present and voting.

No amendment shall become effective until close of the Annual Meeting at which time it is adopted.

### 3. Miscellaneous changes

- a. Changing Chief Executive Officer to *Executive Director*  
page 4 lines 6-7  
page 8 line 41  
page 17 lines 27-28  
page 22 line 4
- b. Changing Roberts Rules of Order to Roberts Rules of Order *newly revised or the Sturgess Code of Parliamentary Procedures, latest edition* shall govern as specified by the Speaker of the House of Delegates at the Opening Session.  
page 28 lines 8, 9, 10
- c. adding (c) and the word "and" before (g) to Active Limited Dues members and deleting (h)  
page 1 line 49
- d. deleting ,a and meeting the following qualification  
page 2 lines 1-2
- e. changing AMA Department of Investigation to AMA *Department of Data Services*  
page 3 line 29 and line 30
- f. deleting and in conjunction with the Association's annual meeting  
page 7 lines 11-12
- g. deleting which and adding *Such*  
page 8 line 33
- h. deleting Past Presidents  
page 8 lines 42-43
- i. deleting (The counting of the three consecutive terms shall commence when the current Alternate Delegates have finished their current term.)  
page 10 lines 2-4
- j. changing elected to *selected*  
page 13 line 5
- k. adding *AMA*  
page 14 line 37
- l. deleting "or Active-Limited Dues"  
page 15 line 45
- m. adding/her  
page 17 line 12  
page 25 line 22  
page 27 line 10  
changing his/her to their/they  
page 26 lines 34, 35, and 37  
changing wishes to wish
- n. adding Board of Trustees or, as appropriate to the House of Delegates  
page 22 line 47
- o. re-numbering of Chapters  
page 18 line 41  
page 22 line 32  
page 26 line 1  
page 27 line 38  
page 28 lines 3, 13, and 35
- p. changing adopted April 1996 to 1998  
page 28 line 44

## Recommendations

Your Committee recommends the above bylaws changes be approved and implementation begin following the 1999 OSMA Annual Meeting.

Respectfully submitted:  
Bruce Storms, MD, Chairman  
Timothy Holder, MD  
Greg Ratliff, MD  
Perry Lambird, MD  
David Russell, MD  
John Bozalis, MD

## ■ REPORT OF THE CONSTITUTION AND BYLAWS COMMITTEE

ADOPTED AS AMENDED  
Reference Committee I (A-99)  
Subject: Annual Report  
Presented by: Bruce L. Storms, MD  
Referred to: Reference Committee I

### Introduction:

The Constitution & Bylaws Committee shall consider amendments proposed by members of the Association or by component societies, and shall present them with its recommendations to the House of Delegates for consideration. The Committee may originate amendments to the Constitution and Bylaws and submit them in like manner to the House of Delegates.

### Review of Activities:

The House of Delegates, at the 1998 Annual Meeting, adopted Resolution 29 stating that the OSMA bylaws be amended to incorporate a representative of the Medical Student Section (MSS) as a member of the OSMA Board of Trustees and that the MSS be entitled to one Delegate and one Alternate Delegate to the OSMA House of Delegates for each MSS chapter represented on each medical and osteopathic medical school campus in the state of Oklahoma. The Board of Trustees, at its January 1999 meeting, requested that the Constitution & Bylaws Committee review the report of the Ad Hoc Committee on Re-apportionment and the request from the Board of Trustees to change the Chairman and Vice Chairman of the Planning & Development Council.

The Committee met on Wednesday, February 17, 1999, to review and make wording changes to the bylaws in regards to Medical Student Section representation on the OSMA Board of Trustees as well as to the OSMA House of Delegates, Trustee Re-apportionment, and the Planning &

Development Council Chairman and Vice Chairman.

The Constitution & Bylaws Committee recommends the following changes to the House of Delegates for its consideration. The recommendations are listed in order and will be discussed and voted on individually.

## Recommendations

### 1. Medical Student Section (MSS) Delegate Representation

The Committee recommends changing the wording in Chapter IV Section 1.04: 1.04 Section Representation.

The following sections shall be entitled to one Delegate and one Alternate Delegate each: Young Physician Section, ~~Medical Student Section~~, Resident Physician Section, and Organized Medical Staff Section. The Medical Student Section shall be entitled to one Delegate and one Alternate Delegate ~~for~~ from each Medical Student Section Chapter represented on each Medical and Osteopathic Medical School campus in the State of Oklahoma.

### 2. Medical Student Section Board of Trustees Representation

The Committee recommends changing the wording in Chapter V Section 1.00 and adding Section 1.01:

#### Section 1.00 Composition.

The Board of Trustees is composed of the Association's general officers and Trustees to be elected from each of the ~~fourteen thirteen~~ authorized Trustee Districts, one Rural Trustee at large, and Trustees elected by the Section recognized in Section 1.01 below. Each district shall be entitled to one Trustee for every 500 physician-members or fraction thereof. In computing the physician population of each Trustee District, only Active, and Active Limited-Dues members shall be counted. An Alternate Trustee shall be elected for each Trustee, but such Alternate Trustee shall serve only in the absence of the Trustee. The Chair of the Board of Trustees may invite such ex-officio members to meetings as deemed necessary or advisable in the conduct of business.

Section 1.01 Section Representation.  
The following Section shall be entitled to one Trustee and one Alternate Trustee: The OSMA Medical Student Section.

### 3. Planning & Development Council Chairman and Vice Chairman

The Committee recommends changing the wording in Chapter IX Section 2.02:

#### 2.02 Appointment.

The Council on Planning and Development should be chaired by the ~~Immediate Past President, President-Elect, with the Immediate Past President serving as the Vice-Chair~~ and shall otherwise consist of the President, President-Elect, Vice-President, Secretary-Treasurer, Speaker of the House of Delegates, Vice-Speaker of the House of Delegates, Chair of the Board of Trustees, Vice-Chair of the Board of Trustees, the Chairs of all other Association Councils and the Delegates ~~and Alternate Delegates~~ to the American Medical Association.

### 4. Trustee Re-apportionment

*The House of Delegates recommends that the Board of Trustees immediately develop guidelines for election in the altered Trustee Districts to ensure a workable transition for all current Trustees and Alternates.*

The Committee made two changes to the proposal submitted by the Rural Health Council at the January Board Meeting. Canadian County be moved to District XIII; and Greer, Harmon and Jackson Counties be moved to District XII. Trustees in both areas have been contacted for their input and agree with the proposed changes.

#### Section 1.00 Composition.

The Board of Trustees is composed of the Association's general officers and Trustees to be elected from each of the ~~fourteen thirteen~~ authorized Trustee Districts, one Rural Trustee at large. Each district shall be entitled to one Trustee for every 500 physician-members or fraction thereof. In computing the physician population of each Trustee District, only Active, and Active Limited-Dues members shall be counted. An Alternate Trustee shall be elected for each Trustee, but such Alternate Trustee shall serve only in the absence of the Trustee. The Chair of the Board of Trustees may invite such ex-officio members to meetings as deemed necessary or advisable in the conduct of business.

Section 2.00 Election of District Trustees. Trustees and Alternate Trustees shall be elected by the House of Delegates at the annual meeting, based upon nominations made by the Delegates from their respective districts. In Trustee Districts consisting of more than one county, the Trustee and Alternate Trustee shall not be elected from the same county. (Only Active members may be nominated and/or elected to a Trustee or Alternate Trustee office. See Chapter I, Section 2.01).

## 2.01 Determination of Representation.

The determination of the number of Trustees to be elected from each of the ~~fourteen~~ thirteen authorized Trustee Districts shall be had by computing the number of Active and Active Limited-Dues members residing in each Trustee District on December 31 of the year preceding the annual meeting at which the Delegates elect the Trustees from the various Trustee Districts.

## Section 3.00 Terms of Office.

All Trustees and Alternate Trustees representing Trustee Districts shall be elected at the annual meeting for concurrent terms of three years each. The general officers shall serve on the Board of Trustees during their terms of office.

## 3.01 Tenure.

No District Trustee shall be elected for more than two full consecutive terms, and shall be ineligible at the expiration of that term for immediate election to Alternate Trustee. This limitation does not apply to Alternate Trustees.

## Section 4.00 Apportionment of Trustee Districts.

The State of Oklahoma has been divided into ~~fourteen (14)~~ thirteen (13) Trustee Districts, as provided in Chapter IV, Section 7.00, composed of the following counties: District No. 1 - Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, Washington District No. 2 - Kay, Noble, Osage, Payne, Pawnee

District No. 3 - Alfalfa, Garfield, Grant, Kingfisher, Logan, Major, Woods

District No. 4 - Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woodward, Roger Mills, Beckham, Custer, Blaine

District No. 5 - ~~Beckham, Blaine, Canadian, Custer, Roger Mills, Oklahoma~~

District No. 6 - ~~Oklahoma~~ Cleveland, McClain

District No. 7 - ~~Cleveland~~ Creek, Lincoln, Okfuskee, Pottawatomie, McClain, Okmulgee

District No. 8 - Tulsa

District No. 9 - Adair, Cherokee, McIntosh, Muskogee, ~~Okmulgee~~, Sequoyah, Wagoner

District No. 10 - Haskell, Hughes, Latimer, LeFlore, Pittsburg, Seminole, Atoka, Bryan, Choctaw, Coal, McCurtain, Pushmataha

District No. 11 - ~~Atoka, Bryan, Choctaw, Coal, McCurtain, Pushmataha~~ Carter, Garvin, Johnston, Love, Marshall, Murray, Pontotoc

District No. 12 - ~~Carter, Garvin, Johnston, Love, Marshall, Murray, Pontotoc, Comanche, Cotton, Tillman, Greer,~~

Harmon, Jackson

District No. 13 - Caddo, Canadian, Comanche, Cotton, Grady, Jefferson, Stephens, Tillman, Kiowa, Washita  
~~District No. 14 - Greer, Harmon, Jackson, Kiowa, Washita~~

## 4.01 Change of Districts.

The House of Delegates may revise the composition of Trustee Districts. Such revision shall require a two-thirds vote of the Delegates present.

## Conclusions

Your Committee recommends the above bylaws changes be approved and implementation begin following the 1999 OSMA Annual Meeting.

Respectfully submitted:

Bruce Storms, MD, Chairman

Timothy Holder, MD

Greg Ratliff, MD

Perry Lambird, MD

David Russell, MD

John Bozalis, MD

## ■ REPORT OF THE OSMA ALLIANCE

FILED FOR INFORMATION

Reference Committee: 1 (A-99)

Subject: Annual Report

Presented by: Diane Cooke, OSMA Alliance President

Referred to: Reference Committee 1

My year as president of the OSMAA began on April 25, 1998 at the Oklahoma City Marriott Hotel as the other officers and I were installed by Sherry Strebel, Past President of the AMA Alliance. Later that afternoon I conducted the Post-Convention Board meeting and the Health Foundation Board meeting. That evening my husband, Robert, and I were honored guests at the OSMA/OSMAA Presidents Inaugural at the Cowboy Hall of Fame. The theme I chose for this year was "Hearts Caring and Hands Working for the Health of the People of Oklahoma." I believe the theme encompasses what the Alliance does best—caring about the health of all Oklahomans and working to improve the health of the people of our state. As in the past our attention has focused on maintaining and increasing membership, promoting health projects, supporting sound legislation, and raising funds for the AMA Foundation.

First Vice-President, Mary Ann Couch and her membership committee worked to retain existing members and to develop new

county Alliances where we knew there was interest. Vice-President Jan Storms arranged meetings with interested physician spouses in Grove, Altus, and Elk City. These were productive meetings and we hope to establish alliances in these counties. Vice President of Members-at-Large Leslie Samara sent letters to spouses of physicians who are eligible to be members-at-large. We are pleased with the result of that effort. Vice President of RP/MSS Andrea Jones encouraged all counties to help sponsor resident physician and medical student spouses. This year awards will be given to the counties with the highest percentage of participation based on their membership.

In the legislative arena, under the leadership of OSMA Legislative Affairs Chair Sherry Strebel, efforts were made to keep us informed on the issues that concerned OSMA. Medicine Day at the Capitol on February 3, 1999, provided an excellent opportunity to visit with our legislators, to hear from Governor Frank Keating and other leaders, and to be advised of the status of pending legislation. Sherry Strebel and her committee did an outstanding job. Attendance was excellent and a buffet lunch was provided for 400 legislators, staff, OSMA members and Alliance members. Sherry has communicated often with the counties through her legislative newsletter. Several counties have followed her step-by-step guide and given "Legislative Desserts." These gatherings provide an excellent opportunity for physicians, spouses, and legislators to exchange ideas and concerns. This year our health promotion project was designed to compliment the ongoing AMA Alliance SAVE project. Health Promotion Chair Mary Ellen Tallerico encouraged counties to provide "Care Boxes" for foster children in their communities. These packages could be filled according to the age and needs of the children. Counties were encouraged to adapt this idea to support shelters in their communities. This project was presented at Confluence in the State Idea Fair and was highlighted in the AMAA publication *Alliance Today*.

AMA Foundation Chairman Sylvia Shirley worked to promote holiday sharing cards to all the county Alliances and also made arrangements for the AMA Foundation auction during the state meeting. As of the end of February this year, our contributions had already exceeded the previous year's. Thanks to all counties for the outstanding effort to provide funds for medical education and research through the AMA Foundation.

The Health Education Foundation will again present scholarships to nursing stu-

dents in Oklahoma who have completed their junior year. Chairman Barbara Boatman, Treasurer Barbara Jett, and the Committee have done an excellent job reviewing the applicants and selecting the winners.

The OSMA Alliance sent five delegates and three alternate delegates to the American Medical Association Alliance Annual Meeting in Chicago, Illinois at the Drake Hotel on June 14-16, 1998. The delegates attending were Diane Cooke (Oklahoma City), President; Cheryl Baker (Edmond), President-elect; Mary Ann Couch (Muskogee), First Vice-President; Jan Storms (Chickasha), Vice-President New Alliance Development; Sylvia Shirley (Oklahoma City), AMA-ERF Chairman. The alternate delegates attending were Ruth Beller (Norman), Sandra Hook (Norman), and Jane Ann Harper (Tulsa). Also present and representing Oklahoma on the national level were Sherry Strebel (Oklahoma City), Past President of the AMAA; Susan Paddock (Ada), Secretary of the AMA Alliance; and Barbara Jett (Oklahoma City), member of the AMA-ERF Committee for the AMAA. We were very pleased to have OSMA staff member Marilyn Fick attend as well. Cheryl Baker and I attended the AMA Alliance Leadership Confluence I in Chicago on October 4-6, 1998, with Jonna Emmons (Edmond) and Sally Judge (McAlester). We also visited the following counties during the fall and winter: Oklahoma County, East Central County, Carter-Love-Marshall, Cleveland-McClain, Pontotoc-Johnston, Grady and Stephens Counties.

I presided over four OSMAA Board Meetings. The first was held on April 25, 1998. The Fall Board Meeting was held September 14, 1998. Our special guest was Mollic O. Krafka, Field Director of the AMA Alliance, who presented the goals of the AMA Alliance for 1998-99 and also conducted a workshop on the Medical Marriage. The Winter Board Meeting was held on January 11, 1999 in Oklahoma City. Our guest speaker was Dr. Gordon Deckert who reported on the State of the State's Health. The final Board Meeting will be held before the state convention in Tulsa on April 16, 1999. It has been such a pleasure to work with OSMA President, Mary Anne McCaffree, MD, and the other officers and staff of the OSMA. Early in the year Dr. McCaffree requested that Alliance members serve on several OSMA Councils. The Alliance was pleased to be included and the following Alliance members agreed to serve on the following councils: Governmental Activities Council: Cheryl Baker, OSMAA President-elect; Member

Services Council: Mary Ann Couch, OSMAA First Vice-President; Professional and Public Relations Council: Diane Cooke, OSMAA President; Public and Mental Health Council: Mary Ellen Tallerico, Health Projects Chairman; State Legislation and Regulation Council: Diane Cooke, OSMAA President.

I would like to thank Recording Secretary Sandy Briepohl, Treasurer Linda Leemaster, Treasurer-elect Siham Ramadan, and Historian Cheryl Tytle for their hard work. They have done a great job. I would also like to thank Finance Chairman Abby King for her work preparing the budget for next year. Our accomplishments this year could not have been attained without the contributions of the Past State Presidents who served on the Board. Thanks to Doris Edge, Barbara Jett, "K" Caldwell, Karen Mask, Judy Critchfield, Jan Storms, Julie Weedn, Mary Ann Deen, Camille Harrison, and Sherry Strebel. Your support has been invaluable to me and to the Alliance. A special thank you goes to President-elect Cheryl Baker for editing and producing four great issues of the Sooner Heartbeat. Thanks to all of the county presidents and presidents-elect. Your attendance at board meetings was appreciated as well as your many accomplishments in your counties. I am grateful to the continued support of the OSMA staff, especially Marilyn Fick. Your help throughout the year was very much appreciated.

Thank you for allowing me the privilege of being your President.

Diane Cooke  
1998-99 President, OSMAA

## **■ REPORT OF THE OKLAHOMA CENTRALIZED VERIFICATION ORGANIZATION, LLC**

FILED FOR INFORMATION

Reference Committee I (A-99)

Subject: Annual Report

Presented by: J. Christopher Carey, MD,  
Chairman, Board of Managers

Referred to: Reference Committee I

The Oklahoma Centralized Verification Organization, LLC (OCVO) was created in 1998 to assist physicians and healthcare organizations by eliminating the costly duplication in verifying credentials. It is the intent to do so in the most economical and efficient manner, while maintaining the control of the credentialing process within organized medicine.

The Tulsa County Medical Society (TCMS) created and developed OCVO into a statewide credentials verification organization. As a result, it needed the financial and marketing support available through the state organization. In April, 1998, the OSMA created a task force to study and make recommendations regarding the acquisition of OCVO. This task force was chaired by Raymond L. Cornelison, Jr, MD, and ultimately recommended to the OSMA Board that the OSMA assume full ownership and operational control of OCVO. It further recommended that the Board appoint a special committee to address specific plans for implementation.

The OSMA Board subsequently appointed a Transition Committee at its July 1998 Board meeting. This committee was chaired by C. Wallace Hooser, MD, and was charged with investigating and recommending a transition plan for the acquisition of OCVO. Fourteen goals for the transition and eleven specific recommendations regarding the corporate and organizational structure personnel, expenses, marketing and business plan were recommended to the Board. These included paying Tulsa County Medical Society a \$65,000 purchase price, and a \$100,000 commitment by OSMA to fund OCVO in 1999.

In October 1998, the Board approved these recommendations with minor modifications and appointed an OCVO Advisory Board to serve until the House of Delegates meeting in April 1999, when the new Board would be elected. J. Christopher Carey, MD, chairs the Advisory Board which was charged with effecting the December 31, 1998, transition by creating: 1) the purchase and sale agreement; 2) a limited liability company for OCVO which reports to the House of Delegates; 3) a marketing plan; and, 4) a business plan.

In December, 1998, the OSMA Board of Trustees approved the 4 items above, and the transfer of ownership was effective January 1, 1999 with the \$100,000 investment paid to OCVO, LLC in early January. This investment is being used to grow the business through marketing, additional office space, personnel, computer software and equipment. The Board selected an executive director, Michelle L. Seba, CMSC, in March.

To increase productivity and grow the business, outside consultants identified the need for equipment upgrades and a marketing plan, and the board has agreed with those conclusions. Emphasis is being placed this year on further development of a detailed marketing plan, and electronic upgrades. A new telephone system has

been approved that will allow for automated attendant and voice mail, with an immediate savings of at least one-half FTE. Hardware and software upgrades will be researched and are expected to be implemented in 1999.

As of January 1, there were thirteen employees in a three-person office within TCMS. The Board approved a lease that allows OCVO to separate from TCMS and move into a larger office at the end of March, 1999. A high-quality, cost-effective and timely product is what we have to offer, and acquisition of competent employees in this field are at a premium. As OCVO continues to grow, we will have to pace our efforts with the availability of staffing to meet our clients' needs.

Although there are extreme up and down cycles in OCVO's business, OCVO has an average growth rate of 28 percent a year with little marketing effort. This growth rate, however, is strictly cost of service with no profits. OSMA's capital investment is to assist with setting the stage so that OCVO can take on additional business, offer new products, and attempt to become financially independent.

OCVO holds an impressive certification for 10 out of 10 verification elements by the National Committee for Quality Assurance until October 2000. This certification is based on the expertise of the personnel, and policies and procedures in place and cannot be transferred. NCQA has stated that the simple transfer of ownership does not alter the certification, and therefore OCVO remains based in Tulsa at the present time.

OCVO's personnel sit on the National Credentialing Forum, and include both the current and immediate past-presidents of the Oklahoma Association of Medical Staff Services. Its staff is made up of medical field professionals, including nursing, medical staff coordinators and provider relations representatives. These people are our advocates who know what credentialing rules to follow for the licensing and accreditation needs of the healthcare organizations that we entrust with our patients.

Less obvious benefits from OCVO include savings to physicians in their offices through creation of credentialing software and the presence of uniform applications. An independent study last year by students at the University of Oklahoma showed that a uniform application would save over seven million dollars per year in Tulsa alone. OCVO has had a uniform application for its clients for eleven years. Some two thousand physicians benefit from software in their offices that, although

OCVO receives no revenue from this, positively affects each bottom line through less time spent filling out applications. It would not exist without OCVO.

Physician support is the key to help make OCVO successful. As OCVO personnel is marketing to healthcare organizations and each physician is urging their hospital, managed care plan, surgery center, and nursing home to use OCVO for credentialing data collection, we will build this vital service.

The credentials verification organization (CVO) business has commercial competitors eager to contract with Oklahoma healthcare organizations. There are ways to meet various accrediting requirements that will turn a profit but are not as effective towards quality or confidentiality. OCVO's methods to ensure quality and confidentiality outweigh its profit motive, making OCVO a vital component in OSMA's role in the peer review process and reducing the cost of healthcare liability.

When you see OCVO paperwork, attend to it first. Make it your priority above the other healthcare organizations not using OCVO. For every OCVO questionnaire answered, there are scores of others not having to be answered because of OCVO's centralized processes and its ability to reuse information.

OCVO has a \$600,000 budget for 1999. As of mid-March, revenues are well into that projection. While the future looks bright for OCVO, we have threats that could disrupt our plans. When national, corporate healthcare giants are clients, we are vulnerable to administrative decisions from across the country that may be negative to OCVO. Will the physician's voice in Oklahoma be strong enough to convince them to continue with OCVO? That voice will consist of help from every physician who makes the effort to contact that healthcare organization.

The 1998 year ended with \$549 in cash and \$37,000 in accounts receivable being forwarded from the Tulsa County Medical Society to OCVO LLC. OSMA invested \$100,000 in OCVO in early January, 1999, as expenses usually run higher than income early in the year. At the end of the most recent accounting period prior to this report (February) cash and accounts receivable are \$124,320.

Technology advances increase more rapidly than equipment to handle it. To stay on the cutting edge, we must have the finances to obtain the equipment, have the software, train the personnel and provide the product.

The OCVO Advisory Board recommends that the OSMA support the efforts of

OCVO to develop an alliance with the Oklahoma Osteopathic Association (OOA), Oklahoma Hospital Association (OHA), and the Health Maintenance Organization (HMO) Association to support the uniform application and further the goals and interests of OCVO as it begins to reach throughout the state and work for the benefit of all the physicians and health care organizations.

In 1999, the House of Delegates will hold its first election for the OCVO Board of Managers. OCVO will further detail its marketing plan to increase its client base, thereby being a greater service to OSMA members. Software and electronic capabilities will be addressed for upgrading, and additional personnel recruited. Additional types of service to members will be reviewed, and your suggestions are most welcomed.

We are proud of the service and its accomplishments. We look forward to a promising future, and thank you for your encouragement and support.

Respectfully submitted,  
J. Christopher Carey, MD, Chairman  
Barbara A. Hastings, MD, Vice-Chairman  
W. F. Phelps, MD, Secretary-Treasurer  
Mary Anne McCaffree, MD,

OSMA President  
Rosemary Bellino, MD  
Kurt Frantz, MD  
Steven A. Mueller, MD  
Gary Lee Paddock, MD  
Brian O. Foy,  
OSMA Executive Director

## ■ REPORT OF THE SECRETARY-TREASURER

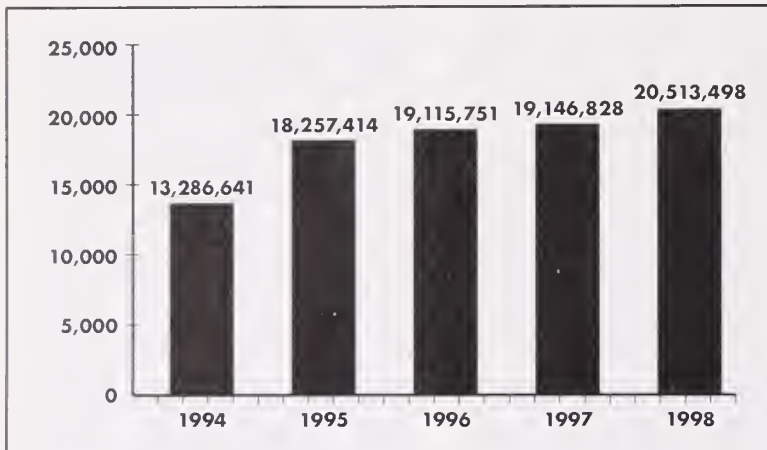
ADOPTED  
Reference Committee I (A-99)  
Subject: Annual Report  
Presented By: Carol Blackwell Imes, MD  
Secretary-Treasurer  
Referred to: Reference Committee I

### Introduction

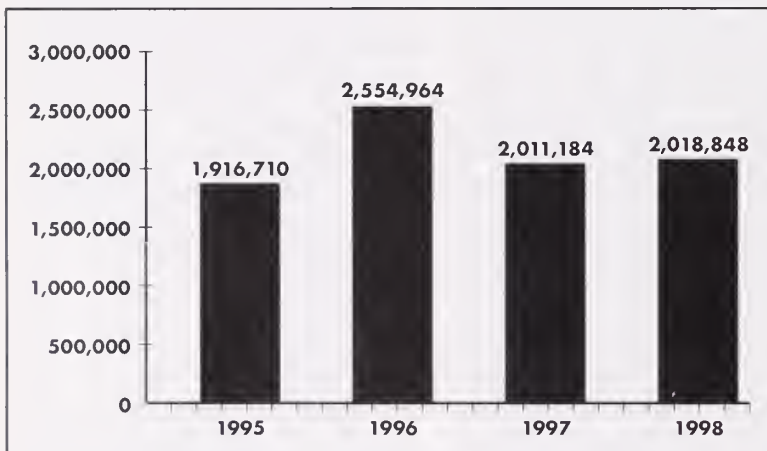
The financial information presented includes:  
Report of the Secretary-Treasurer  
Annual Audit Results & Report by Ernst & Young LLP  
Proposed Annual Budgets

### Background

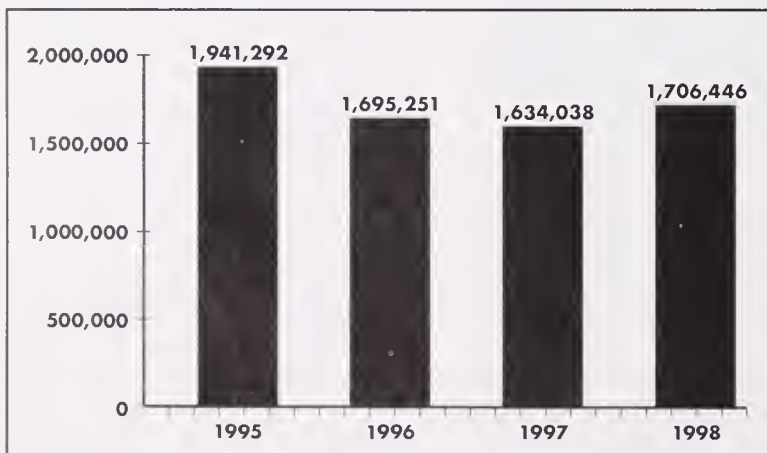
The fiscal year of the OSMA, the Education & Research Foundation and the Member Service For-Profit Corporation is the calendar year January 1 through



**Total Asset Growth, 5-Year Period**



**Four-Year Comparison of Total Revenue as of 12/31**



**Four-Year Comparison of Total Expenses as of 12/31**

Audit Reports cover fiscal year 1998, the proposed annual budgets make projections for fiscal year 1999 and the financial statement is for January 1 through February 28, 1999.

#### **1998 Annual Audit**

The Appropriations and Audit Committee met March 9, 1999, to review the 1998 annual audit reports and to ascertain that the audit was consistent with Association policy and conformed to accounting principles acceptable to the membership. OSMA bylaws require that each year an Appropriations & Audit Committee be appointed to review the audited financial statements of the Association and report the status of these statements to the House of Delegates. The Committee accepted and approved the audit reports as presented.

Ernst & Young LLP wrote favorably of OSMA policies, procedures and accounting in their annual audit results to the Board of Trustees.

The Ernst & Young LLP 1998 financial report concludes that OSMA continues to experience a healthy financial condition and their notes contain additional detailed explanations of the Association's various operations, detailing the important monetary features of the financial statement. The auditor's financial notes are integral to understanding the annual audit and I encourage you to read them carefully. Supplemental information of 1998 revenue and expenses is also included.

The annual audit lists total assets of \$20,513,498, an increase of \$1,366,670 as compared to \$19,146,828 in 1997 (see graph section, Report of the Secretary-Treasurer). Approximately \$1,025,000 of this increase is explained by an Association dues billing and recording computer system change beginning in 1998. AMA and county dues receivable are now included in accounts receivable and AMA and county dues payable are now included in accounts payable. These amounts were not shown in the Statement of Financial Position in previous years.

As in the past several years cash, cash equivalents and investments have increased significantly again in 1998 (see graph section). The 1998 audit report total of \$2,714,688 compared to \$2,383,522 in 1997 reflects a growth of \$331,166. A more detailed explanation of auditor's classification and grouping of investments as to the cost, gains and losses, value, and maturity of investments can be seen in the auditor's notes to financial statements in the audit report.

As explained in a previous paragraph addressing assets, a large part of the increase in accounts receivable (primarily membership dues) is attributed to a dues billing and recording computer system change from previous years. 1999 dues were billed by the middle of November 1998 and the first payment of AMA dues collected by the OSMA was wired to the AMA on December 15. The \$1,844,776 figure represents total 1999 OSMA, AMA and county dues uncollected at December 31, 1998. In 1998 accounts receivable of \$25,900

were written off as uncollectible physician recovery program loans for years prior to 1994.

Prepaid expenses of \$15,267 for various insurance policy premiums paid in advance reflect policy coverage crossing over years.

The annual audit reports that property and equipment grew over \$53,000 this last year by the purchase and capitalization of expenses for building fixtures and equipment, office furniture and additional computer upgrade.

The OSMA investment in PLICO remained unchanged from 1997 to 1998. 1997 after-tax profit of \$20,000 from the Member Service For-Profit Corporation was transferred to the OSMA operating account in 1998.

The liabilities and net assets section of the Statement of Financial Position is not consistent with previous years but instead indicates that accounts payable as well as accounts receivable was also greatly effected by the dues billing and recording computer system change beginning in 1998. 1999 AMA and county dues payable at 12/31/98 made up the larger portion of the accounts payable amount of \$1,210,739.

The increase in deferred membership dues reflects an increase in OSMA membership in 1998 (see graph illustrations of increase in dues revenue, increase in membership and dues rate comparison in graph section).

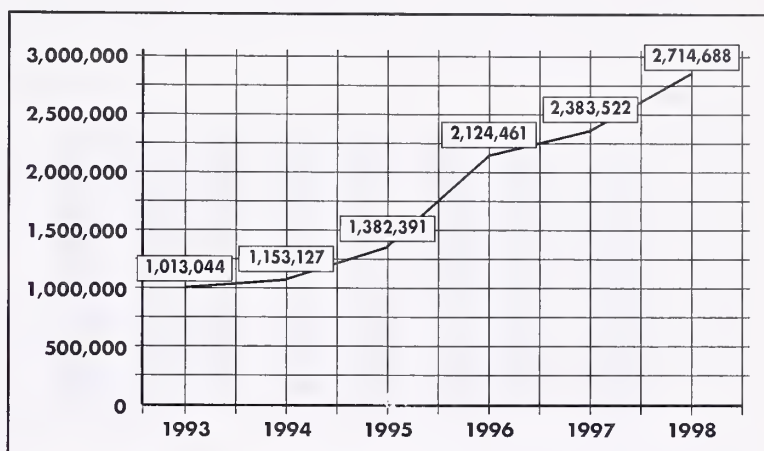
Total net assets increased by \$312,402 in 1998. As you can observe \$2,598,900 is listed as unrestricted and available for continued operation of your Association. Temporarily restricted funds of \$257,781 were collected some years ago and use is limited to loan & scholarship, tort reform, Johnson Memorial and Leebron Memorial.

The schedule of revenue and expenses identifies various sources of Association revenue and indicates that total revenue exceeded budget estimates by \$170,248 primarily due to interest on investments and an additional \$50,000 contribution from PLICO. In 1998 the Association had a normal increase in many of the revenue producing categories. The schedule of expenses when compared to 1997 would indicate that the cost of conducting OSMA business rose by approximately \$72,400 in 1998 (see graph section). Part of this 1998 increase in expenses is accounted for by expanded council and committee activity. 1998 total expenses were \$76,774 below budget estimates although some line items exceeded estimates. Increase in net assets for 1998 is recorded at \$312,402 compared to \$377,146 in 1997. Overall the revenue and expense sections of the financial statement reflect a viable and growing organization.

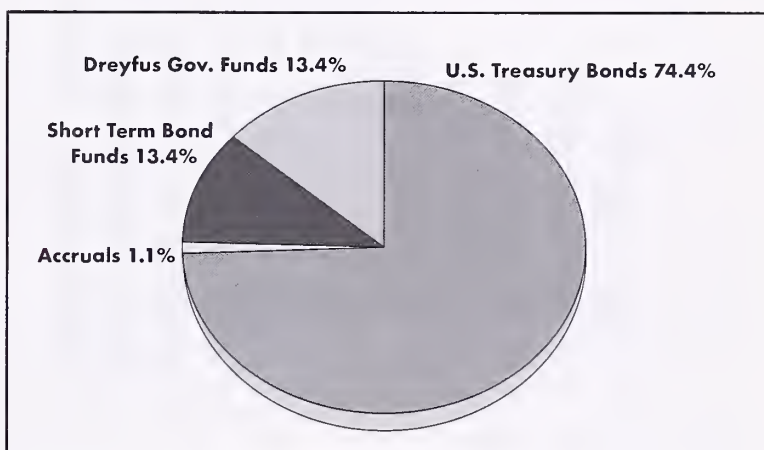
#### Important to Note About 1998

OSMA cash, cash equivalents and investments have continued to show a significant growth and total \$2,714,688 at December 31, 1998.

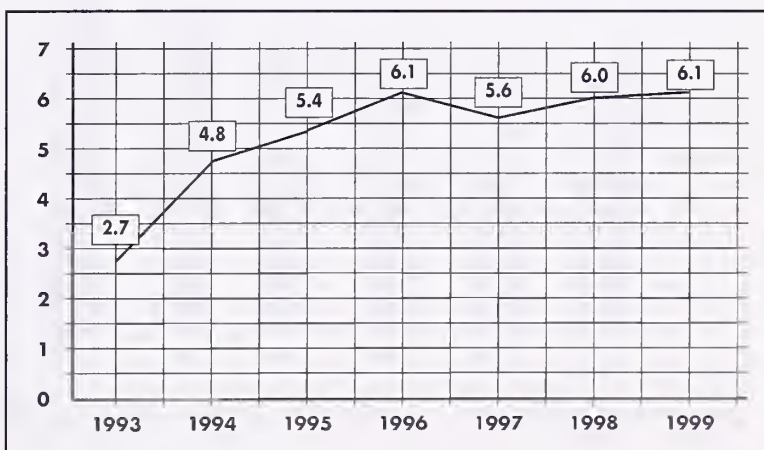
OSMA 1999 annual membership dues (\$300) remained unchanged from the previous six years.



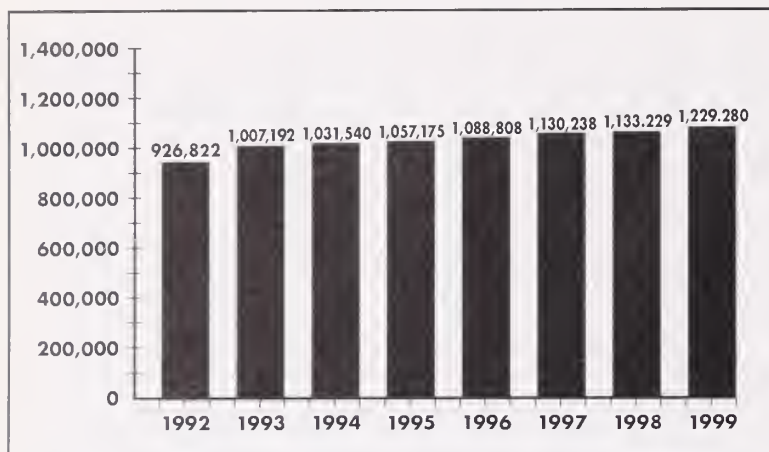
Cash, Cash Equivalents & Investments at 12/31



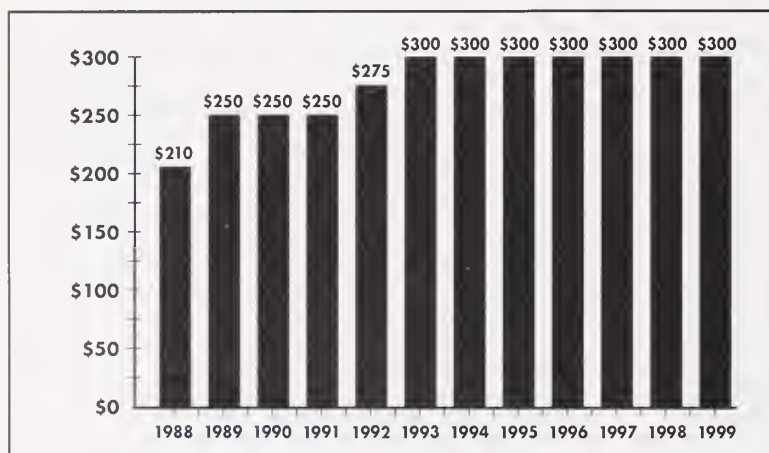
Investment Allocation at 12/31



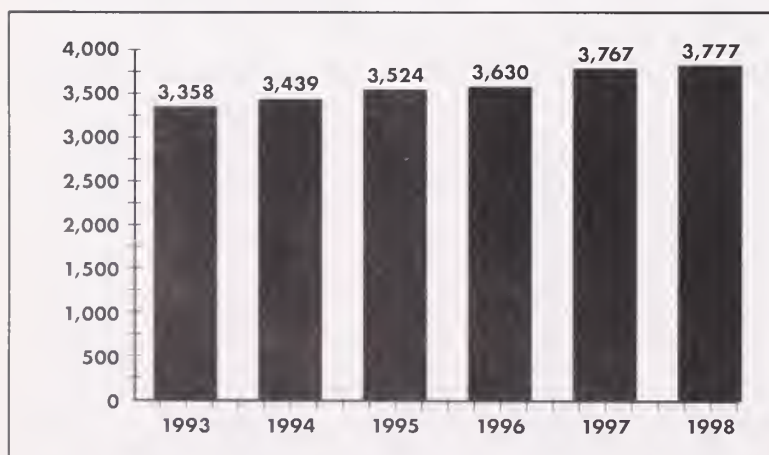
Cash, Cash Equivalents & Investments at 12/31



OSMA Dues Revenue 1992-1999



OSMA Dues Comparison By Years



Increase in OSMA Membership; 6-Year Average, Full Dues Paying Members

The annual audit was successfully completed by Ernst & Young LLP of Dallas, TX in a timely and professional manner and makes the excellent report that total net assets increased by \$312,402 in 1998.

The CPA firm of Hamilton & Associates was retained in 1998 as consultants in reference to implementation of the 401(k), depreciation, investment interest and to file tax returns for the OSMA, Education & Research Foundation and the Member Service For-Profit Corp.

The current OSMA employees profit sharing plan was amended in 1998 to include a 401(k) provision effective January 1, 1999.

The AMA Candidates Campaign Fund reflects a bank balance of \$24,678. These funds are not included in the OSMA financial statement.

1999 OSMA annual membership dues billings in the amount of \$1,170,927 were mailed November 16, 1998. In the 1999 proposed annual budget total OSMA dues represent 57 percent of the total anticipated revenue of the Association.

A decision was made in 1998 that effective January 1, 1999, the Association would acquire the assets of the OCVO for a purchase price of \$65,000 and contribute an additional \$100,000 in support.

The OSMA, Education & Research Foundation and Member Service For-Profit Corporation completed operations within the bottom lines of 1998 budgetary guidelines.

#### 1999 Proposed Annual Budget

Proposed annual budgets for the OSMA, Education & Research Foundation and the Member Service For-Profit Corporation are included and follow the 1998 annual audit reports.

A small excess of revenue over expense is projected in the 1999 annual proposed budgets. The budgets have been written in expectation of the cost of continuing and expanding activities and are based on historical budget projections, actual revenue and expenses. The budgets predict annual revenue adequate to fund the projected programs of the Association, Education & Research Foundation and the Member Service For-Profit Corp.

Numerous council budgets have been adjusted to accommodate increased activities and special projects as submitted by the council chairman.

General membership expenses project normal fixed operational expenses of the Association with inflationary increases. Salary and benefits have been increased to allow for hiring of additional personnel as well as usual annual salary increases.

Expenses are rising and more revenue has been budgeted to accommodate added expenses. \$150,000 of the new money is to be appropriated by PLICO.

The proposed budget has been reviewed and tentatively approved by the Board of Trustees and an attempt has been made to accurately project revenue and expenses as can be determined at this time. Final and official approval of the 1999 proposed annual budgets will be requested of the OSMA House of Delegates at annual meeting in April 1999.

## Summary and Conclusion

The Association has continued to show a steady increase in total assets that have now reached \$20,513,498 at 12/31/98.

OSMA is in excellent financial condition. Cash, cash equivalents and investments totaled \$2,714,688 at 12/31/98 and are available for 1999 OSMA operations and future years.

The 1999 annual budget as submitted is as accurate as can be determined at this time and it represents the operation of the Association and its projected activities.

It has been a privilege to serve as your Secretary-Treasurer for the past six years. During this time the accounting procedures, internal controls and financial status of OSMA greatly improved.

Due to the financially sound condition of the Association, there has not been an OSMA dues increase for six years and the need of an increase is not presently indicated.

## Recommendations

- 1998 Ernst & Young LLP audit reports be accepted.
- 1999 proposed annual budget be approved.
- 1999 first quarter statement be accepted.

Respectfully submitted,  
Carol Blackwell Imes, MD  
Secretary-Treasurer

## AUDIT REPORT TO THE OSMA BOARD OF TRUSTEES

### Board of Trustees Oklahoma State Medical Association

#### Members of the Board:

We are pleased to present the results of our audit of the financial statements of Oklahoma State Medical Association (the "Association") for the year ended December 31, 1998. Our approach for the Association was designed to combine our historical knowledge of the Association's operations as well as the focus of the Association's business and financial concerns discussed in our planning event with management.

This report to the Board summarizes the scope of our engagement and provides communications required by professional standards.

The completion of this year's audit was accomplished through excellent support and assistance from the Association and its management.

## Oklahoma State Medical Association 1999 Proposed Annual Budget

### SUPPORT AND REVENUE

|   | 12/31/97<br>Actual | 1998<br>Budget   | 12/31/98<br>Actual | 1999<br>Proposed<br>Budget |
|---|--------------------|------------------|--------------------|----------------------------|
| <b>Membership</b>                           |                    |                  |                    |                            |
| OSMA Dues                                   | \$1,040,238        | \$1,040,000      | \$1,043,229        | \$1,084,860                |
| Interest                                    | 117,676            | 105,000          | 175,092            | 160,000                    |
| AMA Commissions                             | 51,910             | 50,000           | 52,235             | 50,000                     |
| Building Lease                              | 39,600             | 37,200           | 34,800             | 37,200                     |
| Directory Sales and Advertising             | 40,120             | 55,000           | 75,761             | 70,000                     |
| Computer Labels                             | 10,253             | 8,000            | 7,428              | 7,500                      |
| Member Service For-Profit Corp.             | 20,000             | 20,000           | 20,000             | 15,000                     |
| Member Services Council                     | 39,348             | 20,000           | 21,925             | 20,000                     |
| Contract with Subsidiary - PLICO            | 337,500            | 337,500          | 387,500            | 337,500                    |
| PLICO/OCVO Support                          | —                  | —                | —                  | 100,000                    |
| Misc. Sponsorships                          | —                  | —                | —                  | 20,000                     |
| Other                                       | 111,640            | 2,000            | 29,707             | 2,000                      |
| <b>Total Membership Support and Revenue</b> | <b>1,808,285</b>   | <b>1,674,700</b> | <b>1,847,251</b>   | <b>1,904,060</b>           |

### Journal

|  |                |               |               |                |
|--|----------------|---------------|---------------|----------------|
| Subscription                             | 1,365          | 3,900         | 5,162         | 1,000          |
| Dues Allocation                          | 60,000         | 60,000        | 60,000        | 114,420        |
| Advertising                              | 48,702         | 25,000        | 29,815        | 60,000         |
| <b>Total Journal Support and Revenue</b> | <b>110,067</b> | <b>88,900</b> | <b>94,977</b> | <b>175,420</b> |

### Annual Meeting

|   |                    |                    |                    |                    |
|---|--------------------|--------------------|--------------------|--------------------|
| Exhibit Fees                                    | 30,633             | 30,000             | 32,251             | 40,000             |
| Dues Allocation                                 | 30,000             | 30,000             | 30,000             | 30,000             |
| Sponsorships                                    | —                  | —                  | —                  | 10,000             |
| Ticket Sales                                    | 24,064             | 25,000             | 10,225             | 12,500             |
| <b>Total Annual Meeting Support and Revenue</b> | <b>84,697</b>      | <b>85,000</b>      | <b>72,476</b>      | <b>92,500</b>      |
| <b>Total Support and Revenue</b>                | <b>\$2,003,049</b> | <b>\$1,848,600</b> | <b>\$2,014,703</b> | <b>\$2,171,980</b> |

### Program Services and Support Expenses

|  |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|
| Councils & Committees                                | \$233,683          | \$299,300          | \$329,948          | \$360,200          |
| Journal  | 88,252             | 107,250            | 140,203            | 162,550            |
| Annual Meeting                                       | 93,111             | 77,150             | 63,975             | 75,850             |
| General & Administrative                             | 1,217,922          | 1,274,520          | 1,140,311          | 1,520,500          |
| Contingency  | 1,070              | 25,000             | 22,738             | 45,000             |
| <b>Total Program Services &amp; Support Expenses</b> | <b>\$1,634,038</b> | <b>\$1,783,220</b> | <b>\$1,697,174</b> | <b>\$2,164,100</b> |
| <b>Excess of Revenue over Expenses</b>               | <b>\$369,011</b>   | <b>\$65,380</b>    | <b>\$317,529</b>   | <b>\$7,880</b>     |

### PROGRAM SERVICES

#### Journal Expenses \* (1)

|                                       |                 |                  |                  |                  |
|---------------------------------------|-----------------|------------------|------------------|------------------|
| Management Contract                   | \$0             | \$0              | \$0              | \$36,000         |
| Printing                              | 67,432          | 60,000           | 89,665           | 100,000          |
| Art Work                              | 5,501           | 3,750            | 5,061            | 0                |
| Proofreading                          | 266             | 500              | 486              | 0                |
| Editors Fees                          | 0               | 0                | 0                | 7,600            |
| Contract Services                     | 0               | 0                | 0                | 4,500            |
| Production Expenses                   | 0               | 0                | 0                | 5,000            |
| Postage/Mailing House                 | 0               | 0                | 0                | 6,000            |
| Operating                             | 15,053          | 43,000           | 44,991           | 3,450            |
| <b>Total Journal Program Services</b> | <b>\$88,252</b> | <b>\$107,250</b> | <b>\$140,203</b> | <b>\$162,550</b> |

#### Annual Meeting Expenses \* (2)

**\$63,975      \$75,850**

# Oklahoma State Medical Association 1999 Proposed Annual Budget (continued)

## PROGRAM SERVICES (continued)

|   | 12/31/97  | 1998      | 12/31/98  | 1999            |
|---|-----------|-----------|-----------|-----------------|
|   | Actual    | Budget    | Actual    | Proposed Budget |
| <b>Council &amp; Committee Expenses</b> |           |           |           |                 |
| Public Relations* (3)                   | —         | —         | —         | 15,000          |
| Professional Communications* (4)        | \$49,021  | \$53,000  | \$101,061 | \$40,000        |
| Planning & Development                  | 2,475     | 2,500     | 1,948     | 3,000           |
| Medical Services                        | 93        | 1,000     | 820       | 3,000           |
| Member Services* (5)                    | 31,029    | 20,000    | 17,389    | 20,000          |
| Public & Mental Health* (6)             | 997       | 1,500     | 2,864     | 53,000          |
| State Legislation* (7)                  | 98,587    | 132,000   | 147,019   | 136,650         |
| OMPAC                                   | 708       | 10,800    | 8,337     | 10,800          |
| Governmental Activities* (8)            | 32,282    | 41,500    | 30,259    | 40,000          |
| Organized Medical Staff Section         | 2,136     | 4,000     | 1,651     | 4,000           |
| OSMA Alliance                           | 4,840     | 10,000    | 10,402    | 10,000          |
| Medical Student Section* (9)            | 5,743     | 10,000    | 6,110     | 12,000          |
| Resident Physicians Section             | 0         | 1,000     | 0         | 1,000           |
| Rural Health                            | 0         | 1,500     | 300       | 2,000           |
| Young Physician Section* (10)           | 4,634     | 7,500     | 0         | 6,000           |
| International Medical Graduates         | 877       | 2,000     | 1,788     | 2,750           |
| Medical Ethics & Competency             | 261       | 1,000     | 0         | 1,000           |
| Total Council & Committees              | \$233,683 | \$299,300 | \$329,948 | \$360,200       |

## GENERAL/ADMINISTRATIVE

### Membership

|  |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|
| Salaries                                     | \$389,884          | \$453,000          | \$409,917          | \$565,000          |
| Payroll Taxes                                | 31,616             | 45,000             | 31,100             | 45,000             |
| Profit Sharing Plan                          | 23,195             | 46,575             | 22,324             | 50,000             |
| Pension Plan - Termination                   | 1,155              | —                  | —                  | —                  |
| Health Insurance                             | 35,323             | 49,450             | 56,700             | 65,000             |
| Staff & Officers                             | 63,469             | 85,000             | 76,829             | —                  |
| Staff & Travel                               | —                  | —                  | —                  | 13,000             |
| Officer Travel                               | —                  | —                  | —                  | 6,000              |
| Officer Stipends                             | —                  | —                  | —                  | 48,000             |
| Staff/Officers Miscellaneous                 | —                  | —                  | —                  | 6,000              |
| Exec. Committee/Board of Trustees            | —                  | —                  | —                  | 6,500              |
| Executive Director Search                    | 56,985             | —                  | —                  | —                  |
| Disability Insurance                         | 2,604              | 3,355              | 2,991              | 3,600              |
| In-state Travel                              | 340                | 500                | 445                | —                  |
| Office Supplies                              | 41,343             | 40,000             | 42,594             | 40,000             |
| Office Equipment (Repair & Service)          | 939                | 1,000              | 2,216              | 7,500              |
| Postage                                      | 39,369             | 40,000             | 51,915             | 55,000             |
| Telephone                                    | 21,109             | 25,000             | 20,846             | 24,000             |
| General Insurance                            | 25,518             | 35,000             | 21,453             | 30,000             |
| Utilities                                    | 21,839             | 22,000             | 20,368             | 22,000             |
| Building Services                            | 3,917              | 5,000              | 4,552              | 5,000              |
| Building Maintenance & Repair                | 12,283             | 12,000             | 13,027             | 15,000             |
| Yard Maintenance                             | 6,241              | 6,000              | 5,493              | 8,000              |
| Accounting & Audit                           | 9,830              | 12,000             | 8,809              | 12,000             |
| Legal Services                               | 133,113            | 60,000             | 5,053              | 25,000             |
| Computer (Maint. & Ops)                      | 15,565             | 35,000             | 9,966              | 80,000             |
| Computer Upgrade                             | 1,537              | 24,000             | —                  | 10,000             |
| Dues & Subscriptions                         | 3,616              | 6,000              | 5,324              | 5,000              |
| Awards & Contributions                       | 2,546              | 2,500              | 2,429              | 3,000              |
| County Dues Commissions                      | 28,130             | 25,000             | 23,180             | 25,000             |
| AMA Delegation* (11)                         | 97,893             | 131,140            | 117,601            | 94,900             |
| Depreciation                                 | 83,650             | 80,000             | 88,805             | 80,000             |
| Trustee Fee - Reserves                       | 2,272              | 3,000              | 4,132              | 3,000              |
| OCVO   | 50,000             | 0                  | —                  | 165,000            |
| Other  | 8,685              | 12,000             | 12,454             | 3,000              |
| <b>Total General/Administrative Services</b> | <b>\$1,217,922</b> | <b>\$1,274,520</b> | <b>\$1,140,311</b> | <b>\$1,520,500</b> |
| <b>CONTINGENCY</b>                           | <b>\$1,070</b>     | <b>\$25,000</b>    | <b>22,378</b>      | <b>45,000</b>      |

As always, we strive to continually improve the quality of our services and welcome your feedback on ways we can continue to meet and exceed your expectations. If you have any questions or comments regarding the 1998 audit or any other matters, please call Kathy Garrett at (214) 969-8568.

Very truly yours,  
Ernst & Young, LLP

## OSMA 1998 AUDIT RESULTS

### Summary of Audit Scope

Our audit was completed as planned. This plan was designed to be responsive to the assessments of the business, audit and other risks identified during the planning process of our audit of the December 31, 1998 financial statements of the Association.

In addition, as a regular part of our audit of the financial statements, we made a study and evaluation of internal control only to the extent we considered necessary to determine the nature, timing and extent of our auditing procedures. This study was not sufficient to enable us to render a separate opinion on the effectiveness of the internal control structure over financial reporting. Also, our audit would not necessarily disclose all the weaknesses in the system of internal control because it was based on selective tests of accounting records and supporting data. However, as a result of our study and evaluation, for the limited purposes described above, no material weakness in internal accounting came to our attention during the performance of our audit procedures.

### Required Communications

Statement of Auditing Standards No. 61 requires the auditor to ensure that the Board receives additional information regarding the scope and results of the audit that may assist the Board in overseeing the Association's financial reporting and disclosure process. Summarized below are certain of the more significant matters noted in connection with our audit and comments on certain specific matters that current practice requires to be communicated to the Board.

### Communications

Auditors' Responsibilities under Generally Accepted Auditing Standards

The financial statements are the responsibility of management. Our audit was designed in accordance with generally accepted auditing standards, which provide for reasonable, rather than absolute, assurance that the financial statements are free of material misstatement.

Our responsibility as your auditors is to plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. As such, our audit of the Association's financial statements is not designed to determine the Association's readiness for the Year 2000. Further, we have no responsibility with regard to the Association's efforts to make its systems, or any other systems, such as those of vendors, service providers or any other third parties Year 2000 ready, or to provide assurance on whether the Association has addressed or will be able to address all affected systems on a timely basis.

As a part of our audit, we obtained a sufficient understanding of internal controls to plan our audit and to determine the nature, timing and extent of our audit procedures. We will issue a report dated February 3, 1999, which will include an opinion on the Association's 1998 financial statements as to conformity with generally accepted accounting practices in all material respects.

#### Significant Accounting Policies

Initial selection of and changes in significant accounting policies or their application and new accounting and reporting standards during the year.

No significant changes in accounting policies or adoption of new accounting or reporting standards in 1998.

#### Management Judgments and Accounting Estimates

The preparation of financial statements requires the use of accounting estimates. Certain estimates are particularly sensitive due to their significance to the financial statements and the possibility that future events may differ significantly from the Association's expectations.

None identified.

#### Significant Audit Adjustments

No audit adjustments were recorded. Audit adjustments identified during the audit but not recorded were immaterial to the financial statements individually and in the aggregate.

#### Significant Unusual Transactions

Auditing Standard No. 61 requires communications to the Board about methods used to account for significant unusual transactions.

#### Controversial or Emerging Areas

Auditing Standard No. 61 requires communications to the Board about the effects of significant accounting policies

### OSMA Education and Research Foundation 1999 Proposed Annual Budget

|   | 12/31/97<br>Actual | 1998<br>Budget   | 1999<br>Proposed<br>Budget |
|---|--------------------|------------------|----------------------------|
| <b>Foundation Revenue</b>   |                    |                  |                            |
| Bank Interest   | \$4,387            | \$3,000          | \$3,000                    |
| <b>Foundation Expenses</b>  |                    |                  |                            |
| Bank Charges  | 55                 | 50               | 50                         |
| Annual Tax Return   | 420                | 500              | 500                        |
| Audit   | —                  | —                | —                          |
| Total Foundation Expenses   | 475                | 550              | 550                        |
| <b>Foundation Revenue over Expenses</b>   | <u>\$3,912</u>     | <u>\$2,450</u>   | <u>\$2,450</u>             |
| <b>Physician Recovery Program Revenue</b>   |                    |                  |                            |
| PLICO   | 125,000            | 125,000          | 125,000                    |
| Oklahoma Osteopathic Association  | 12,000             | 12,000           | 12,000                     |
| Oklahoma Dental Association   | 13,000             | 12,000           | 12,000                     |
| Contributions - Other   | 392                | 500              | 250                        |
| Total Physician Recovery Program Revenue  | \$150,392          | \$149,500        | \$149,250                  |
| <b>Physician Recovery Program Expenses</b>  |                    |                  |                            |
| Director Contract   | 46,609             | 75,000           | 89,000                     |
| (includes Secretarial Support, Hot Line, Travel)  | —                  | 6,000            | —                          |
|   | —                  | 1,500            | —                          |
|   | —                  | 1,500            | —                          |
| Total for Director  | \$46,609           | \$84,000         | \$89,000                   |
| <b>Associate Director (OKC)</b>   | 12,000             | 12,000           | 13,200                     |
| <b>Associate Director (Tulsa)</b>   | 29,427             | 19,500           | 19,500                     |
| Travel for Associate Directors  | —                  | 3,000            | 3,000                      |
| Total for Associate Directors   | \$41,427           | \$34,500         | \$35,700                   |
| Program Loans   | \$0                | \$10,000         | \$10,000                   |
| Meetings  | 154                | 3,000            | 3,000                      |
| Membership Dues (FSPHP)   | —                  | 500              | 500                        |
| Brochures, Programs & Speakers  | 50                 | 14,000           | 3,000                      |
| Other   | —                  | —                | —                          |
| Total Meetings, etc.  | \$204              | \$17,500         | 16,500                     |
| Total Physician Recovery Program Expenses   | \$88,240           | \$146,000        | \$141,200                  |
| <b>Physician Recovery Program Revenue over Expenses</b>                                     | <u>\$62,152</u>    | <u>\$3,500</u>   | <u>\$8,050</u>             |
| <b>Council on Medical Education Revenue</b>   |                    |                  |                            |
| Hospital Accreditation  | \$3,000            | \$2,400          | \$4,000                    |
| AMA-ERF PAI Project Grant   | 7,500              | —                | —                          |
| Contributions from Dues   | 100                | 100              | 100                        |
| Total Council on Medical Education Revenue  | \$10,600           | \$2,500          | \$4,100                    |
| <b>Council on Medical Education Expenses</b>  |                    |                  |                            |
| Survey Fees   | —                  | 1,500            | 2,600                      |
| Travel - Dr. Sheldon/CME Coordinator/Site Surveys   | 1,701              | 1,000            | 2,256                      |
| Meeting Catering  | 317                | 500              | 500                        |
| Accreditation   | 520                | 800              | 520                        |
| Conference Registration   | —                  | 800              | —                          |
| PRA Booklets  | —                  | —                | 72                         |
| CME Alliance Membership   | —                  | —                | 195                        |
| CME provider annual meeting (2 programs)  | 3,692              | 3,000            | 4,000                      |
| Total Council on Medical Education Exp.   | \$6,230            | \$7,600          | \$10,143                   |
| <b>Council on Medical Education Revenue over Expenses</b>                                   | <u>\$4,370</u>     | <u>\$(5,100)</u> | <u>\$(6,043)</u>           |
| <b>OSMA Education &amp; Research Foundation Proposed Budget Total Revenue over Expenses</b> | <u>\$70,434</u>    | <u>\$850</u>     | <u>\$4,457</u>             |

# OSMA Member Service For-Profit Corporation 1999 Proposed Annual Budget

|   | 12/31/97      | 1998          | 1999                   |
|---|---------------|---------------|------------------------|
|   | <u>Actual</u> | <u>Budget</u> | <u>Proposed Budget</u> |
| <b>Revenue</b>  |               |               |                        |
| C.L. Frates   | \$6,000       | \$8,000       | \$6,000                |
| I.C. Systems  | 3,600         | 6,000         | 4,500                  |
| Destinations  | 548           | 300           | 0                      |
| Tax Resources   | 2,565         | 2,000         | 2,500                  |
| Conomikes   | 1,473         | 1,000         | 500                    |
| Autoflex  | 1,500         | 1,500         | 1,000                  |
| UPAL  | 563           | 1,000         | 1,000                  |
| Stillwater Bank   | 9,141         | 3,000         | 0                      |
| TravCon   | 0             | 0             | 1,500                  |
| Quest   | 0             | 0             | 300                    |
| IDS   | 0             | 0             | 150                    |
| MBNA  | 0             | 0             | 0                      |
| Other   | 1,828         | 400           | 0                      |
| Bank Interest   | 439           | 300           | 300                    |
| Total OSMA Members Service For-Profit Corporation Revenue | \$27,657      | \$23,500      | \$17,750               |
| <b>Expenses</b>   |               |               |                        |
| Federal & State Taxes                                     | 6,043         | 3,000         | 3,000                  |
| Tax return preparation & filing                           | 415           | 500           | 500                    |
| Other   | —             | —             | —                      |
| Total OSMA Members Service For-Profit Corporate Expenses  | \$6,458       | \$3,500       | \$3,500                |
| Revenue over Expenses                                     | \$21,199      | \$20,000      | \$14,250               |

in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

None identified.

## Disagreements with Management on Financial Accounting and Reporting Matters

None.

## Consultation with Other Accountants

None.

## Major issues Discussed with Management Prior to Retention

None.

## Serious Difficulties Encountered in Performing the Audit

None. Cooperation from the management has been excellent.

## Material Errors, Irregularities and Illegal Acts

None identified.

## Significant Disclosures Not Made

None.

## Material Weakness or Reportable

## Conditions

Auditing Standard No. 60 requires that any reportable conditions noted be communicated to the Board. Such conditions are defined as matters which represent significant deficiencies in the design or operation of the internal control structure which would adversely affect the Association's management ability to record, process, summarize and report financial data consistent of the assertions of the Association in the financial statements.

None identified.

## REPORT OF OSMA MEMBERSHIP COORDINATOR

### ADOPTED

Reference Committee I (A-99)

Subject: Life Membership

Presented by: Kaye Borroughs, OSMA Membership Coordinator

Referred to: Reference Committee I

### Review of Activities:

The OSMA Board of Trustees has granted life membership to the following physicians since the last House of Delegates meeting in April of 1998:

## July 12, 1998 Board Meeting

Ned T. Harney, MD  
Richard E. Harrison, MD  
J. William Hood, MD  
Galen P. Robbins, MD  
Bobby G. Smith, MD  
Harry B. Stults, MD

## October 18, 1998 Board Meeting

Ronald C. Boden, MD  
Kenneth E. Bohan, MD  
George B. Carter, MD  
A. Paul Compton, MD  
Leon N. Gilbert, MD  
A.V. Leslie Hill, MD  
Bartis M. Kent, MD  
Fay Knickerbocker, MD  
Harold A. Masters, MD  
H. Ruth Mershon, MD  
Hugh Perry, MD

## January 17, 1999 Board Meeting

Ernest William Allen, MD  
Marcus Barker, MD  
James Cochran, MD  
Richard Dotter, MD  
Everett R. Dunlap, MD  
Roy Fielding, MD  
Walter H. Gary, MD  
Gregory A. Green, MD  
Bernard E. Guenther, MD  
Kenneth C. Hoffman, MD  
Philip J. Maguire, MD  
Leo Meece, MD  
Dwane B. Minor, MD  
Alexander D. Raptou, MD  
C. T. Thompson, MD  
Robert G. Tompkins, MD  
S. Fulton Tompkins, MD  
Frank Tull, MD  
John E. Ward, MD  
O. Alton Watson, MD  
William J. Williams, MD

As stated in Chapter I, Section 2.031 of the OSMA Constitution and Bylaws, these physicians must be approved for life membership by the House of Delegates at the annual meeting.

## REPORT OF THE OSMA DELEGATION TO THE AMA

### FILED FOR INFORMATION

Reference Committee: I (A-99)

Subject: AMA Delegation Report

Presented by: Jay A. Gregory, MD, Chairman

Referred to: Reference Committee I

## Introduction

The OSMA Delegation to the American Medical Association (AMA) represents the OSMA at both the Annual and Interim Meetings of the AMA House of Delegates.

The OSMA Delegation is currently comprised of eight delegates and eight alternate delegates; four delegates and four alternate delegates are elected at each OSMA Annual Meeting. The current Delegation is as follows:

## Delegates

Jay Gregory, MD, Chair  
David L. Harper, MD  
Norman Dunitz, MD  
Gary Strelb, MD  
Mary Anne McCaffree, MD  
W.F. Phelps, MD  
Perry Lambird, MD  
William Hall, MD

## Alternates

William G. Bernhardt, MD  
Bruce Storms, MD  
Sanku S. Rao, MD  
Greg Ratliff, MD  
Carl Hook, MD  
Mukesh Parekh, MD  
Jack J. Beller, MD  
Patrick Lester, MD

The Delegation meets on a daily basis at each meeting with delegates from the states of Kansas, Missouri and Arkansas, known collectively as the "Heart of America" (HOA) Caucus. The HOA Caucus serves to facilitate the interests of states that have regional similarities and share common borders. The HOA Caucus reviews and discusses policy matters before the AMA House of Delegates and interview candidates seeking election to the AMA Board or Councils.

## Review of Activities

### 1998 AMA Annual Meeting:

The Delegation attended the AMA Annual Meeting, June 14-18, 1998 in Chicago, IL.

Fifteen of the total 16 delegates were present, with David M. Selby, MD, serving in the place of Dr. Lester. Also present from Oklahoma at this meeting were: D. Robert McCaffree, MD, Oklahoma City, President, American College of Chest Physicians; George Kamp, MD, Tulsa, delegate from the American College of Radiology; and Tisha Dove Westmoreland, MD, Lawton. Dr. Robert McCaffree served as the Chair of Reference Committee D, while Drs. Dunitz and Hall served on Reference Committees A and F respectively.

## OSMA Resolutions

Below is a listing of the resolutions submitted by the OSMA categorized by AMA House action:

### Adopted:

- Resolution 132: Fixed Reimbursement to Physicians for Laboratory Services

- Resolution 617: AMA Protocol

### Adopted as Amended:

- Resolution 7: Physicians in Congress
- Resolution 232: User Fees
- Resolution 233: Legislation to Abolish ERISA Protection in Managed Care Plans
- Resolution 817: AMAP
- Resolution 828: JCAHO Sentinel Event Policy
- Resolution 835: E & M Guidelines

### Referred to Board of Trustees:

- Resolution 618: AMA Public Relations Campaign
- Resolution 719: Definition of "Medical Necessity"
- Resolution 836: Medicaid Physician Reimbursement

### Policy Reaffirmed:

- Resolution 234: Collective Bargaining for HealthCare Professionals

- Resolution 235: Federal Tax Code Changes Regarding Health Insurance

### Not Adopted:

- Resolution 236: AMA Task Force
- Resolution 424: Needle Exchange Programs and HIV/AIDS
- Resolution 616: Composition of AMA Appointed Advisory Bodies, Work Groups, Committees.

\* More detailed information on any of the above resolutions can be obtained by contacting the OSMA or one of the delegates/alternates.

## Other Meeting Highlights

- Nancy W. Dickey, MD, a board-certified family physician from College Station, Texas, became the 153rd (and first woman) president of the American Medical Association on June 17, 1998.
- Jay A. Gregory, MD, a general surgeon from Muskogee, Okla., and Chair of the OSMA Delegation to the AMA, announced his candidacy for election to the AMA Board of Trustees in 1999.

- The AMA formally introduced its new Executive Vice President, E. Ratcliffe ("Andy") Anderson, Jr., MD, who addressed the House of Delegates and briefly spoke to the OSMA Delegation at the Heart of America Caucus Meeting on Wednesday, June 17. Dr. Anderson is a dermatologist, former U.S. Air Force Surgeon General and Immediate Past CEO of Truman Health Systems in Kansas City, Mo.

- The AMA referred to the Board a controversial report from CEJA (Council on Ethical and Judicial Affairs) addressing the sale of health-related non-prescription goods from physicians' offices.

- The AMA adopted a resolution calling for the AMA conduct a thorough study of the Year 2000 computer problem and how this may affect the delivery of health care services for physicians and patients.

- The AMA adopted a resolution calling for the AMA to initiate a campaign to educate the general public and legislators about the differences between physicians and non-physician providers regarding their unique training, experience, knowledge, ability, and overall expertise.

- The AMA adopted a substitute resolution calling for the AMA, in conjunction with appropriate specialty organizations, to strongly urge the FDA to conduct a survey of practicing physicians to assess the effects of direct-to-consumer advertising of prescription drugs on physicians' practices and patient care. This report was presented at the AMA Interim Meeting in December.

- The AMA adopted the Report of the Ad Hoc Committee to Study Sunbeam, which included seven recommendations to ensure that situations that surrounded the Sunbeam matter do not occur again. Mary Anne McCaffree, MD, OSMA President, was a member of the Ad Hoc Committee.

- The AMA adopted as amended a resolution calling for the AMA to restore funding for "The Extinguisher" anti-tobacco program.

## 1998 AMA Interim Meeting

The Delegation attended the AMA Interim Meeting in Honolulu, HI, December 6-9, 1998. All 16 delegates were present at this meeting as well as: Boyd O. Whitlock, MD, Tulsa, OSMA President-elect; D. Robert McCaffree, MD, Oklahoma City, Delegate, American College of Chest Physicians; and George Kamp, MD, Tulsa, Delegate, American College of Radiology. In addition, Dr. Phelps served as a member of Reference Committee H.

## OSMA Resolutions

Below is a listing of the resolutions submitted by the OSMA categorized by AMA House action:

### Adopted

- Resolution 4: Confidential Patient Information to Fourth Parties
- (Adopted Substitute Resolution 4 in lieu of Resolution 4 and 9)
- Resolution 120: Withdrawal from Negotiated Rule-Making in Regards to Medical Necessity (Adopted recommendations contained in Board of Trustees Report 38 in lieu of Resolutions 112, 119 and 120.)
- Resolution 307: Subspecialists Functioning as Primary Care Physicians (Adopted substitute Resolution 307)
- Resolution 437: Application of Funds from the Tobacco Settlement (Adopted Substitute Resolution 431 in lieu of Resolutions 431, 433, 434, 436 and 437; Original Resolution 432 Adopted.)

### Other Meeting Highlights

#### E&M Guidelines

The AMA House reaffirmed the association's policy of strong opposition to numerical counting formulas in Medicare's E&M Guidelines. The House also acted on a variety of other resolutions relating to the guidelines, which have created controversy among physicians:

- Responded decisively to physician outrage regarding the unfair enforcement of Medicare fraud and abuse rules, adopting a "clear and unambiguous" statement that the "honest physicians of America have had enough and will no longer stand for petty harassment by auditors or for being falsely accused of abusive and fraudulent behavior."
- Demanded major changes in Medicare pre-payment and post-payment review programs that would require that physicians receive due process and accurate and clinically informed review of their services.
- Called for well-designed pilot tests to assess any new E&M guidelines before any possible implementation by HCFA.
- Reaffirmed the AMA's efforts to advance other alternatives to numerical guidelines as a basis for coding review, including peer review of statistical outliers.

#### AMA Structure, Governance and Operations

Adopted a comprehensive report address-

ing recommended changes in the AMA's structure, governance and operations, with the following highlights:

- The goals of the AMA Strategic Plan should become an overarching part of all Board and Council meetings, with all new initiatives and emerging issues regularly measured against the plan.
- AMA Bylaws will be amended to: include a Board Chair and Chair-Elect as officers each limited to a single one-year term, with the Chair-Elect automatically succeeding to Chair; preclude the Chair from immediately running for the position of President-elect; provided that no AMA officer or trustee shall be eligible to serve as Executive Vice President within three years of leaving office.
- The Speaker and the President should establish a committee of the House to determine the structure of compensation and to establish the amount of compensation for the Board of Trustees annually. The committee will provide an informational report annually to the House.

#### Long Range Planning

In response to a report from the Council on Long Range Planning and Development, established a special task force of the House to develop a detailed plan to transform the Federation of Medicine into a more cohesive, collaborative, competitive environment for physicians. Mary Anne McCaffree, MD, OSMA President, was appointed to serve on this special committee.

#### Miscellaneous

##### Unified States

##### Membership/AMA Dues

At the October meeting of the OSMA Board of Trustees, Dr. Gregory briefly informed the Board re: a membership pilot project established between AMA and the Massachusetts Medical Society (MMS) whereby physicians in Massachusetts could join MMS and AMA for a total of \$420.00 (\$200 MMS/\$220 AMA). Both AMA and MMS were willing to lower their dues by \$200 in an effort to attract new members to both organizations. The sense of the OSMA Board was outrage that the AMA would be willing to lower its dues to \$220 in a non-unified state, yet completely ignore a loyal unified state, such as Oklahoma, with any similar or comparable membership dues pilot project.

The AMA Delegation took these feelings to heart and asked Brian Foy, OSMA Executive Director, to contact the other three unified states (Illinois, Mississippi, and Delaware) to determine their knowl-

edge of and/or reaction to the AMA/MMS pilot. None of these states were aware of the pilot at that time; however, once fully informed, expressed similar feelings of outrage and neglect. At about the same time, the AMA, now fully aware of our collective frustrations, sent a letter to each of the unified states offering options for a 1999 AMA dues rebate and soliciting input for a future, more comprehensive member benefits program for the year 2000 and beyond. The OSMA Executive Committee reviewed this letter on November 18, 1998 and tentatively voted in favor of the \$315 dues option for 1999 if, and only if, this was the best deal attainable.

Immediately prior to the AMA Interim Meeting in Hawaii, Mr. Foy contacted each of the unified states to determine their reaction to the AMA letter. Each state was clearly upset that the AMA was not offering the lowest dues option available (\$220) and agreed with Mr. Foy's idea of convening a meeting of physician leadership and executive staff of the unified states in Honolulu to discuss a coordinated response. Prior to this joint meeting, the OSMA Delegation thoroughly discussed this matter at its Caucus on Saturday morning, December 5. The Delegation was unanimous in its support of pursuing a reduced, 1999 AMA dues rate of \$220 for Oklahoma physicians and in meeting with the other three unified states to discuss a joint effort.

A joint meeting of the physician leadership and executive staff of the four unified states was subsequently held on the afternoon of Saturday, December 5, in the Oklahoma Suite. A decision to pursue the lowest AMA dues rate currently available (\$220) for members of unified states was unanimous. On Monday, December 7, leadership from the unified states met with the Chair and Vice Chair of the AMA Board of Trustees, as well as the Board's Membership Liaison and AMA Senior Staff to address their concerns. The end result of these discussions was: 1) a reluctance of the AMA to commit to a 1999 rebate lower than around \$300 without a comparable reduction in state dues; 2) a willingness by the AMA to develop a comprehensive unified states benefit program for 2000 and beyond (with input from the Unified States) to be submitted to the AMA Board of Trustees in February, 1999.

It was evident that the AMA heard our concerns loud and clear: that members of unified states deserve first class service and the lowest dues available to any physician in the Federation. The following day, AMA Board Chair, Randolph Smoak, MD, disseminated a report to the House of

Delegates outlining AMA membership recruitment efforts through pilot projects and underscoring a plan to revamp the current unified states membership program.

On January 14, 1999, the OSMA submitted a formal response to the AMA with suggestions for inclusion in a comprehensive benefits program for unified states in 2000 and beyond. The AMA Board is still studying this matter and will likely have a proposal to offer the unified states in the next few months.

Shortly after submitting the above letter, the OSMA received a follow-up letter from the AMA clarifying a proposed membership dues pilot for 1999. This offer was approved by the OSMA Executive Committee and Board of Trustees on January 17; thus, each active, full dues-paying member will receive a rebate check of \$78 directly from the AMA, amounting to a total AMA dues of \$300 for 1999. Also, the appropriate county medical society and the OSMA will each receive \$100 for every new AMA member in 1999.

A meeting was held at OSMA Headquarters on February 2, 1999, involving staff from AMA, OSMA, Tulsa County Medical Society, and Oklahoma County Medical Society, to resolve the mechanics of the rebate program. Rebate checks will be sent to individual members directly from the AMA, in two separate mailings, beginning in May, 1999.

Your Delegation and OSMA Leadership are pleased that we were able to negotiate an AMA dues rebate for you in 1999. We look forward to negotiating with the AMA to develop a future membership dues/benefits program that will be the envy of every member of a non-unified state.

#### Jay A. Gregory, MD, Campaign for AMA Board of Trustees

Enclosed is a copy of a letter I sent in November, 1998 to all AMA Delegates and Alternates introducing my candidacy for the AMA Board of Trustees in 1999. At the AMA Interim Meeting, I participated in several lunches hosted by the OSMA, which included selected OSMA Delegates and Alternates. These lunches were held with leadership from the Texas, New York and California Delegations to allow our delegates to get to know one another better in the spirit of camaraderie and cooperation. In accordance with AMA regulations regarding the Interim Meeting, my candidacy for the Board was never openly addressed; however, I found these lunches to be a very valuable and cost effective way to get to know many new delegates in an intimate setting. All expenses associated

with the lunches and the mailing of the letter were approved by the OSMA Campaign Oversight Committee.

At the AMA National Leadership Conference, March 20-23, 1999, in Phoenix, I hosted a dinner involving many delegates from around the country. I plan to soon visit with OSMA Leadership and AMA delegates/alternates, as well as OSMA staff to finalize a campaign strategy leading up to the AMA election in June, 1999. If you have any suggestions or ideas, I would appreciate hearing from you. Many thanks for your support and confidence.

#### Next Meeting

The next meeting of the American Medical Association's House of Delegates will be June 20-24, 1999, at the Chicago Hilton and Towers.

Respectfully submitted,  
Jay A. Gregory, MD, Chair



## REFERENCE COMMITTEE II

### ■ REPORT OF THE COUNCIL ON PROFESSIONAL AND PUBLIC RELATIONS

#### ADOPTED

Reference Committee: II (A-99)

Subject: Annual Report

Presented by: Gary F. Strebel, MD, Chair

Referred to: Reference Committee II

#### Introduction:

Historically, the Council on Professional and Public Relations has been responsible for the internal and external communications of the Oklahoma State Medical Association, including maintaining understanding about medical issues among patients and physicians and keeping members informed about policies of the Association. However, pending the approval of the proposed Bylaws changes at the Annual Meeting, this Council will be divided into two entities. One will be the Council on Public Relations, to be chaired by Dr. Strebel, and the other will be the Council on Professional Communications, with Dr. John C. Leatherman serving as chair.

According to the proposed Bylaws changes:

The **Council on Public Relations** will be charged with *planning and conducting all activities of the Association with respect to public relations and public service projects in cooperation with other Councils and Committees of the Association. The activities of the Council are to be governed by the Association's Annual Program of Activities as determined and interpreted by the Board of Trustees.* This has been interpreted to include media relations and other such external communications in support of the Association's goals.

The **Council on Professional Communications** is to be given the responsibility for planning and conducting all activities of the Association with respect to interprofessional and intraprofessional communications, *all in cooperation with other Councils and Committees of the Association. The activities of the Council are to be governed by the Association's Annual Program of Activities as determined and interpreted by the Board of Trustees.* Subcommittees of this Council include the *Journal* Editorial Board and the Computer Technology Subcommittee

#### Review of Activities:

The Council met on Monday, March 15, at OSMA Headquarters. At that time, the Council:

- Voiced its support of the Board-appointed "Physicians' Campaign for a Healthier Oklahoma" and its goals, recognizing public health education as one of the Association's primary goals for the coming year and acknowledging the role the Council will play in helping promote the campaign. Both Dr. Strebel and Dr. Leatherman took part in a day-long retreat held on Saturday, March 13, 1999, as part of the organizational effort for the campaign.
- Discussed the importance of developing a Media Response Team and a protocol when receiving requests for comments or statements from the media on behalf of the Association.
- Directed that a public relations plan be developed to support both the short-term and long-term goals of the Association, including recommending the resource allocations that will be necessary to conduct these activities.

#### Other:

- Effective February 1, 1999, the Association has hired Brenda F. Hays as its Communications Director. Ms. Hays is an Accredited Public Relations practitioner with an extensive background in healthcare communications.
- In conjunction with Medicine Day, held at the State Capitol on February 3, 1999, press packets were prepared and distributed to the major print and electronic media throughout the state. On the day of the event, personal contacts were made with members of the Capitol press corps and other media representatives.
- An OSMA-sponsored Media Briefing was held on March 3, 1999, in the Blue Room at the State Capitol. The purpose of the briefing was the formal release of the *State of the State's Health* report (SSHR) and to present a public report of the initiatives already underway as well as those being proposed on the part of OSMA to address those public health issues. Dr. McCaffree hosted the briefing, and Dr. Gordon Deckert served as

spokesperson for the OSMA in presenting the SSHR results.

In addition, Drs. John Bozalis, Sara Reed DePersio, Timothy Holder, and Hal Vorse made presentations on current public health projects with which they and the OSMA are affiliated. (*Note: For a more detailed description of these initiatives, please refer to the report from the Physicians' Campaign for a Healthier Oklahoma Taskforce.*)

The standing-room-only crowd at the Media Briefing included representatives from the State Board of Health; the State and City/County Health Departments; the State Department of Education; the Legislature and a number of other health advocacy groups as well as representatives from both the print and electronic media statewide. Media interest continues to be generated as a result of this event, and plans are to continue to build upon this momentum as additional story ideas are developed and as genuinely newsworthy events take place.

- Letters to the editors of 43 Oklahoma newspapers were sent from Dr. Mary Anne McCaffree regarding the Medicare "fraud" campaign utilizing senior-citizen informants. As of this writing, the letter has appeared in the *Daily Oklahoman* and the *Tulsa World*. It is expected that a number of other newspapers printed the letter, but an exact count will not be available until the newspaper clippings arrive from the clipping service.

#### Subcommittees:

The **OSMA Journal Editorial Board** met on Wednesday, March 10, 1999, at OSMA Headquarters. Dr. Ray McIntyre, OSMA *Journal* Editor-in-Chief, chaired the meeting.

The Board voted on this year's *Journal* awards, which will be announced at the upcoming Annual Meeting.

Board members expressed their concern over the fact that, at the current rate, the *Journal* will be over budget by the end of the year. In order to take corrective actions, Business Manager Brenda Hays was asked to prepare a report consisting of options that might be undertaken to reduce expenses while maintaining the quality and integrity of the *Journal*. This information is to be presented at the next Editorial Board meeting, tentatively scheduled for May.

To help curb expenses immediately, the Editorial Board voted to eliminate the complimentary reprints being given to authors. This is a practice that was begun in July of 1998 and has added an average of \$530 per

issue to the cost of producing the *Journal*. It was believed that the OSMA could provide authors with several copies of the complete issue of the *Journal*, if requested, at less cost than providing reprints.

#### The Editorial Board also voted to:

- raise advertising rates by 10 percent beginning in the year 2000 and recommended that an aggressive effort be made to increase the amount of *Journal* advertising;
- increase non-member subscription rates to \$45 yearly from the current cost of \$30;
- publish a list of OMPAC members in the *Journal* three times yearly at no cost to OMPAC.
- that the agreement between the OSMA and the University Microfilms Library Services be renewed. (This is an agreement under which we provide three copies of each *Journal* and then receive 15 percent of the invoiced sales price of each copy. The Board members believed that it was beneficial to OSMA to have these copies in the OUHSC Library.)

Dr. McIntyre recommended that the Editorial Board members be reappointed and that their stipends be continued at the current rate. In addition, it was suggested that an effort be made to recruit a psychiatrist and an orthopedic surgeon to serve on the Board. The need to meet more often than once per year was also discussed, as was the importance of conveying to the OSMA Board of Trustees the fact that the Editorial Board is aware of, and addressing, operational and budgetary issues.

**The Computer/Technology Subcommittee** met several times during the past year and also made a presentation to the Board of Trustees at its October 1998 meeting. At that time the Board authorized some seed money for the development of an MIS program. The options of employing a full-time MIS manager or engaging an outside consulting firm were evaluated, with the result being the signing of an agreement between OSMA and Advanced Imaging Systems (AIS), a local computer consulting firm. Under the general direction of Drs. Timothy Walker and Andrew Gin, AIS will be undertaking two immediate projects: the Y2K situation and the Association's website. The OSMA

communications director and her assistant will also share the responsibility for updating and maintaining the website.

#### Recommendations

1. That the OSMA *News* and the *Journal* be continued and supported.
2. That a public relations plan be developed to support the short- and long-term goals of the Association.
3. That *Journal* advertising rates be raised by 10 percent beginning in the Year 2000.
4. That non-member subscription rates to the *Journal* be raised from \$30 to \$45 yearly.
5. That a list of OMPAC members be published in the *Journal* three times each year at no cost to OMPAC.
6. That the agreement between the OSMA and the University Microfilms Library Services be renewed.
7. That the Association's MIS priorities be directed toward the Y2K situation and the Website for the remainder of the year.
8. That the Board of Trustees approve the Council's recommendations regarding the *Journal's* Editorial Board members.
9. That all stipends be continued at their current rate of \$500/mo. for the Editor-in-Chief and \$200/yr. for Editors.

#### Conclusions

The creation of separate Councils is seen as a reflection of the importance the Association places on its internal and external communications with all its various audiences and constituencies. In addition, a review of the goals presented by the Council on Planning and Development makes it very apparent that both the Council on Public Relations and the Council on Professional Communications have a strong role to play in the attainment of those goals. An effort is being made to recruit new members who share the current members' desire to take an active role in the work of these Councils.

Respectfully submitted,  
Gary Strebel, MD, Chair, Oklahoma City  
Chris Carey, MD, Oklahoma City  
Robert F. Finnegan, MD, Lawton  
Andrew Gin, MD, Oklahoma City  
Charles A. Howard, MD, Tulsa  
Gordon Lantz, MD, Tulsa  
John C. Leatherman, MD, Norman  
James Michael McGee, MD, Tulsa  
Ray V. McIntyre, MD, Kingfisher  
J. Michael Pontious, MD, Enid  
Ruth H. Oneson, MD, Oklahoma City  
Johnny Roy, MD, Oklahoma City

David Russell, MD, Enid  
Anthony Sebastian, MD, Oklahoma City  
David M. Selby, MD, Enid  
Timothy Walker, MD, Oklahoma City  
Robert J. Weedn, MD, Duncan  
Clifford G. Wlodaver, MD, Oklahoma City  
David Kendrick, Medical Student  
Diane Cooke, OSMAA

### ■ REPORT OF THE COUNCIL ON PUBLIC AND MENTAL HEALTH

#### FILED FOR INFORMATION

Reference Committee II (A-99)

Subject: Annual Report

Presented by: Robert M. Mahaffey,  
MD, Chair

Referred to: Reference Committee II

#### Introduction

It is the goal of the Council on Public and Mental Health to represent the Association in all matters related to public and mental health including, but not limited to, maintaining effective liaison with public and private organizations engaged in activities of this type, and the sponsorship of programs for the betterment of public and mental health. During the past Association year, the Council met on September 16, 1998; October 7, 1998; November 11, 1998; December 16, 1998; January 13, 1999; and February 17, 1999.

#### Review of Activities

##### Public Health Agenda

In collaboration with Public Strategies, the OSMA's former public relations firm, a budget of \$53,000 was developed and approved to cover up to four public health projects that would promote OSMA visibility through media or publications. The first of these was a media briefing announcing the results of the State of the State Health Report on March 3, 1999 at the State Capitol.

##### State of the State's Health Report

Oklahoma mortality rates are leading the nation, e.g., infant mortality. In the June 1998 issue of *JAMA* an article titled, "Socioeconomic Differences," described how heart disease was identified as being higher in Oklahoma than the rest of the United States. Gordon Deckert, MD, a member of the Council and the Oklahoma State Board of Health, discussed the specific data collected by each county as compiled

in the *Chronic Disease Mortality Rates for Selected Sites per 100,000 Oklahoma Residents By County, By Sex, By Race 1975-1995* booklet from the Chronic Disease Service. The facts are significant. All Oklahoma physicians are strongly encouraged to practice prevention. An OSMA statewide policy could make a difference based upon data collected county by county.

On November 11, 1998, it was suggested that a press conference focused on the State of the State's Health be organized. This press conference would pose OSMA's concerns. It was suggested that an Advisory Subcommittee be formed to address the issue. Gordon Deckert, MD, Hal Vorse, MD, George Prothro, MD, and Sarah DePersio, MD were appointed to the subcommittee.

#### **Advisory Subcommittee - State of the State's Health Report**

Gordon Deckert, MD, strongly urged OSMA to take a lead role in responding to state health issues. In dealing with these issues, OSMA should be proactive and not reactive. A subcommittee advisory group was appointed to include: Gordon Deckert, MD, George Prothro, MD, Hal Vorse, MD, and Sarah DePersio, MD. The group met on December 1, 1998 and December 16, 1998. The Council approved the subcommittee advisory group's recommendation to develop a comprehensive, coordinated, and integrated plan that would address issues of prevention that would fall in line with the goals of Campaign for Health 2000. The plan defines, announces and publicizes the problems. The creation of this comprehensive plan must move smoothly into the Campaign for Health 2000.

The subcommittee advisory group gave a report to the Council on Public and Mental Health on January 13, 1999.

#### **Task Force Appointed**

On January 17, 1999, the Board of Trustees approved the process plan presented by Gordon Deckert, M.D. developed by the subcommittee advisory group. (See attachment—process plan).

#### **Campaign for Health (see attachment)**

A concern was expressed regarding the image of OSMA to not only the public but to its own members. A suggestion was made to develop goals that would suffice the needs of a comprehensive campaign beginning in the year 2000.

Permanent financing for public education and public health campaign issues will be researched.

#### **• Clearinghouse**

\$5000 in budget to pull together information to create an OSMA clearinghouse of information resources. The Oklahoma State Health Department and the Internet will be resources used to acquire information for the clearinghouse.

#### **Put Prevention in Practice (PPIP)**

A national research-based public/private program. Its purpose is to increase the appropriate use of clinical preventive services (screening, immunizations, and counseling). The program could be implemented by first educating the physician about the program, then educate the public through health promotion activities. If Oklahoma takes the initiative, it could be in the forefront in developing this program. Texas is the only other state developing it at the present time.

Robert Mahaffey, MD, Chair, CPMH, suggested that medical schools should teach their students to include questions about preventive behaviors when taking patient history. Gordon Deckert, MD, has contacted the Dean at the OUHSC College of Medicine. History workup outlines will be reviewed. Dr. Deckert will follow up on Clinical Prevention Workups.

#### **Stroke Prevention Project**

In 1995, the Texas Medical Association (TMASPP) introduced a stroke prevention program. This program, titled "Stroke Prevention Program of the '90s," was initiated in well over 80 Texas counties. The OSMA will collaborate with the Oklahoma Stroke Coalition to benchmark the physician arm of this proposed comprehensive statewide program that has been in operation in Texas. DuPont Pharma is the educational funding source for this program.

On November 3, 1998, Tim Holder, MD, Chair, OSMA Stroke Prevention Program; Walter Buell, MD, Chair, TMASPP Stroke Prevention Program; Mike Wolfe, American Heart Association (Texas); and Alice Aldridge, TMASPP staff coordinator met to discuss the details of initiating this program in Oklahoma. The Stroke Prevention Program could be offered with CME Category 1 credit. DuPont Pharma will provide grant money for

the employment of a part time staff person. The target audience of this program will be primary care physicians. The OSMA Stroke Prevention Program Committee includes Tim Holder, MD, OSMA; Brian Foy, OSMA Executive Director; Marisa New, Director, Sociomedical Economics and Health Care Policy. OSMA will work in collaboration with the Stroke Coalition to include, but not limited to, the Oklahoma Academy of Family Physicians, Oklahoma Health Sciences Center, Oklahoma Stroke Coalition, and the Oklahoma Foundation on Medical Quality. The Stroke Prevention Program Committee is planning to meet January 7, 1999.

The Stroke Coalition met on January 7, 1999. All of the above-mentioned parties were present. On behalf of the Stroke Coalition and OSMA, Glenda Whitsett, RN, was appointed Stroke Prevention Project Coordinator. The following was discussed in detail: CME opportunities, outcome measures, organizations to be involved, and a grant proposal.

The Council on Public and Mental Health recommended to the Board of Trustees that the OSMA officially become a member of the Oklahoma Stroke Coalition.

On January 17, 1999, the Board of Trustees approved OSMA active membership as part of the Oklahoma Stroke Coalition.

A grant proposal will be submitted to DuPont Pharmaceuticals to fund the Stroke Prevention Project in late March 1999.

#### **Schools for Healthy Lifestyles**

John Bozalis, MD, provided the Council an overview of the program "Schools for Healthy Lifestyles." The program, modeled after the Kentucky Health Promotion Schools of Excellence Program, promotes the maintenance of healthy behaviors, lifestyle choices and knowledge in children, school staff and families. The focus of this Oklahoma City-based program is on four areas of prevention: injury prevention, physical activity, cancer prevention, and cardiovascular risk prevention. The Department of Human Services awarded the program a \$250,000 grant that will be distributed over a five-year period. The "Adopt a Doc Program" has been an excellent public relations plus for the medical community. John Bozalis,

MD, would like to take the program statewide but states that first, outcome studies will be necessary.

### **Women's Health Issues**

A Volunteers Speakers Bureau addressing Women's Health Issues has been created. 27 speakers were recommended with 19 positive responses to speak on a variety of women's health-related issues.

### **Tobacco Free Oklahoma Coalition (TFOC)**

As a member of TFOC, OSMA Representatives attend weekly Policy Committee meetings. Diane Cooke, OSMA Alliance, has been asked to participate and offer support in assisting the Coalition. The Council supports the TFOC in strongly urging legislators to mandate the majority of the tobacco settlement monies go toward public health efforts toward tobacco prevention and cessation. The comprehensive program developed by the Oklahoma State Health Department is also endorsed by the OSMA.

- **Tar Wars Program**

The Board of Trustees approved the donation of \$1,000 to the Tar Wars Program.

The program targets 5th grade students. Secondary to increased awareness of tobacco advertisements and peer pressure, this group is identified to be at high risk for initiating tobacco use. Every year each school sponsors a poster contest with its theme being tobacco prevention. Winners will advance to state and national contests.

**First National Alcohol Screening Day** Scheduled for April 8, 1999. An article announcing the Screening Day was published in the April issue of the *OSMA Journal*. Membership will be informed on the day's events via the newsletter. Co-sponsored Oklahoma sites are: A Chance to Change Foundation, The Referral Center for Alcohol & Drug Services, NAIC-Center for Oklahoma Alcohol & Drug Services, and the Phoenix Recovery Institute and New Direction Centers of America.

The first-ever National Alcohol Screening Day (NASD). NASD, a program of the National Mental Illness Screening Project (NMISP) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA), is conducted

in partnership with thousands screening sites across the country.

The success of National Depression Screening Day (NDSD) and its sister programs for anxiety disorders and eating disorders provided the impetus for the National Mental Illness Screening Project (NMISP) to launch National Alcohol Screening Day (NASD). The success of National Depression Screening Day, NMISP's flagship program, and NMISP programs for eating disorders and anxiety disorders has proven that widescale mental health screening can be effective as an intervention. Due to the high morbidity of alcohol problems with depression, anxiety, and eating disorders, it was a natural step in developing National Alcohol Screening Day.

NASD includes a community-based program conducted through health care facilities such as hospitals, treatment centers, and mental health clinics; and a college based program conducted through campus health and counseling centers. The program is provided free to members of the public and is designed to take place on Thursday, April 8, 1999, during Alcohol Awareness Month. NASD includes an educational component, a brief self-assessment survey to be completed anonymously by participants, a short screening interview with a health professional, and a referral for a complete evaluation if indicated. NASD does not attempt to offer a diagnosis but rather is an opportunity to point out to participants the presence or absence of symptoms indicating the likelihood of an actual or emerging alcohol problem and offer a referral for further evaluation.

### **Subcommittee Reports**

#### *Geriatric Task Force:*

The Geriatrics Task Force met on September 21, 1998, November 9, 1998, January 25, 1999, and March 1, 1999. The goal of the Task Force is to emphasize the health of older Oklahomans' through physician education and public education. To better educate the physician regarding geriatric care the Task Force has submitted ten articles to the *OSMA Journal*. It has also created the "Geriatric Clinical Pearl" and has been published in the OSMA newsletter. A Geriatrics Speakers Bureau is also under development.

- Education for Physicians on End-of-Life Care (EPEC)

A Train the Trainer Program was

attended by Marie Bernard, MD and John Belzer, PhD. A one-hour CME program will be offered at the 1999 Annual Meeting to introduce the EPEC curriculum.

Two seminars are scheduled for June 18-19 in Oklahoma City, and September 10-11 in Tulsa.

#### *Substance Abuse Committee:*

The Substance Abuse Committee met on August 27, 1998 and November 5, 1998.

- **Governor's Task Force Committee**  
The Council was informed that Senator Ben Brown of the Governor's Task Force Committee on Substance Abuse urged the OSMA to take a leadership role on substance abuse in the state. Education in medical schools, graduate medical, CME and to the public are vital to promote the prevention, diagnosis and treatment of chemical dependency was the focus of the Substance Abuse Committee.

- **Scientific Program on Substance Abuse - Tobacco, Alcohol, and other Drugs**

A scientific program could not be scheduled for the 1999 Annual Meeting. The motion was approved to discuss with the Council on Medical Education requesting a program in the 2000 Annual Meeting to include a broad range of issues/programs for CME time.

#### *Family Violence Subcommittee:*

The Family Violence Committee met on August 13, 1998 and December 10, 1998.

Edward Brandt resigned as Chair of the Subcommittee. Howard Shaw, M.D. will be his replacement. The shell bill titled, "Child Abuse MultiDisciplinary Team Account" was discussed.

#### **Perinatal Task Force**

On October 22, 1998, the Perinatal Task Force met.

The OSMA was requested to provide support in stopping the development of the Medical Plaza for Women and Infants by St. Mary's Mercy Hospital and INTEGRIS Bass Baptist Hospital in Enid, Oklahoma. Both hospital medical staffs and the community expressed strong concerns. The proposal included

eliminating the OB services at both hospitals. Other major concerns were that the Catholic directive would need to be followed which would limit tubal ligation and contraceptive services. Infant and perinatal services would also be affected. The Women's Center would be the only option available for women in the area to receive health care services. As an independent site, the Center would not have immediate access to hospital surgical, respiratory, and emergency facilities which would increase the risk for birth complications and multi trauma pregnant women. Stanley Hupfeld, INTEGRIS Health, was contacted by the Board of Health for his response. Mr. Hupfeld stated, "Tubal ligation services will continue to be provided in Enid at INTEGRIS Bass Baptist Health Center. The transportation process of moving a patient from the Medical Plaza to a level III hospital will be no more costly or dangerous than is the present care provided." On March 6, 1999, the announcement was made to discontinue plans to build the Women's Center. St. Mary's Mercy Hospital and its parent, Mercy Health Systems, cited financial changes in the health care industry as the primary factor in canceling the \$12 million project. Other reasons for not building were stated as being those concerns voiced by physicians and the community.

Cindy Rogers, MD and Alicia Vanhooser, MD with the Garfield County Medical Society and Vivian Atchinson, Community Organizer express their appreciation to the OSMA for our support in this cause.

#### Letters Written

- *Emerson Teen Parent Program*, Louise Foster, Director, Oklahoma City
- *H.E.L.P. - Handguns Lowering Plan - Handgun Violence Prevention Program*
- *Noise Pollution - Public Endangerment Within Theaters* - Haven Tobias
- *National Tobacco Policy and Youth Smoking Reduction* - Jim Inhofe, U.S. Senate
- *Climb It Safe!* - American Academy of Orthopaedic Surgeons Program
- *Endorsing the Tobacco Plan and Budget supported by the Tobacco Oklahoma Free Coalition* - Tobacco Oklahoma Free Coalition

#### Conclusion

The Council on Public and Mental Health is dedicated to provide the citizens of Oklahoma, as well as OSMA

members, with timely information regarding the medical aspects of public and mental health and to oversee programs in these areas.

Respectfully submitted,

Robert Mahaffey, MD, Chairman  
Robert J. Weedn, MD, Vice Chairman  
Jeffrey Beal, MD  
Marie Bernard, MD  
Chester Bynum, MD  
Edgar Cleaver, MD  
James Crutcher, MD  
Gordon Deckert, MD  
Sara DePersio, MD  
Stuart Hoff, MD  
Timothy Holder, MD  
Bertha Levy, MD  
Robert McCaffree, MD  
Mary Anne McCaffree, MD  
John Nettles, MD  
Mukesh Parekh, MD  
George Prothro, MD  
Edd Rhoades, MD  
Joseph Ruffin, MD  
Mike Talley, MD  
Ed Tyson, MD  
Hal Vorse, MD  
Peter Winn, MD  
Mary Ellen Tallerico, OSMAA

## ATTACHMENT

### Process Plan 1-13-99

**Campaign for Health 2000** (Title to be determined by Task Force)  
OSMA Program to Improve the Health of Oklahomans

#### Goals:

- To inform the public and the body politic of the health status of Oklahomans.
- To emphasize the role and responsibility of Oklahoma physicians in being proactive in health promotion by working independently with their patients and in collaboration with community leaders and organizations with the goal of improving the health of the people of Oklahoma.

#### Objectives:

##### Initial Implementation

1. Support and authorization from Board of Trustees.
2. Appointment by Board of a Campaign for Health 2000 Task Force

- A relatively small working group, membership from appropriate existing councils and committees, Alliance, OSMA President, ex officio member, chaired by Dr. Weedn, naming Dr. Deckert as spokesperson, assigning staff.

Jan. 17

3. Charge Task Force (working with Staff) to:
  - 3.1 Develop a specific "content plan" and budget for and review, modification and support by Board prior to House of Delegates meeting.
  - 3.2 Proceed with initial media briefing and statewide press releases.
  - 3.3 Continue existing programs within the Council on Public and Mental Health including but not limited to: Stroke Prevention Program and the Tobacco Free Oklahoma Coalition.

Feb. & Mar.

4. Presentations to county medical societies (and other groups), by invitation, by members of Task Force. Initially, media will not be invited.
  - Develop a structured multimedia presentation for use by OSMA membership.

Late Feb.-early Mar.

5. Media briefing (perhaps at State Capitol) with simultaneous statewide press releases.

April 16, 17

6. Action by House of Delegates for an ongoing program.

April - May

7. Media releases re: stroke, tobacco and alcohol.

#### Examples: Media Briefing (2-3 hrs)

1. Sponsored OSMA. Cosponsored by? At State Capitol?
2. Appropriate material distributed after 3.3 and 3.4 below but prior to 3.5.

### 3. Program - A Panel of Presenters

- Chair by Spokesperson

- 2 min 3.1 Welcome - OSMA President
- 5 min 3.2 Brief introduction of sponsors and panelists
- 20 min 3.3 *State of the State's Health* - OSMA's view and response
- 4-5 min 3.4 Examples of current initiatives, especially featuring OSMA, county medical societies, and individual members
- 1 hr. 3.5 Media/panel interaction
- 3.6 Announce program for periodic press conferences and statewide press releases (pending House of Delegates approval) - summer and fall

### 4. Simultaneous press releases related to media briefing.

## ■ REPORT OF THE TASK FORCE PHYSICIANS' CAMPAIGN FOR A HEALTHIER OKLAHOMA

#### ADOPTED

Reference Committee II (A-99)

Subject: Annual Report

Presented by: Robert J. Weedn, Chair

Sara R. DePersio, Vice-Chair

Referred to: Reference Committee II

#### Review of Activities:

The concept of a "Campaign for Health" arose in the Long Range Planning Council's refinement of the OSMA's mission statement and its organizational goal number one, "to promote the best health for the people of Oklahoma and a professional, ethical and compassionate manner by advocating for patients, representing physicians and promoting the art and science of medicine." Over the last two to three years, it was clear that an action plan needed to be developed. At the last Annual Meeting, the concept of a "Campaign for Health" was introduced focusing on this goal.

As medicine evolves in the 21st century, there clearly will be a greater focus on prevention and self care and even to some extent, complimentary or alternative medicine. Doctors may need to be teachers as well as healers. Our efforts will be better accepted if we work to enhance health and wellness as well as treat illness. We should stimulate the public and our

patients to recognize and take responsibility for their own health through lifestyle modification. With compassion and concern for our patients and the public, the "Campaign for Health" is a way to distinguish OSMA and its members as leaders. The campaign should show our heart and help us win a place in the heart of our patients and the public. Ultimately, the campaign is about behavior modification and lifestyle change. When one looks at the State of the State's Health Report, it is clear that our lifestyle is a large part of what is killing us and decreasing the quality of our lives.

The campaign concept was taken to the Council of Public and Mental Health in September. A subcommittee of the Council studied the concept, and developed a process plan. On January 17, 1999, the Board of Trustees approved the plan and the recommendations from the Council on Public and Mental Health. The principle recommendation was to create and develop a comprehensive, multi-faceted "Campaign for Health" task force with the charge to:

1. Inform the public and body politic of the problems delineated in the 1999 *State of the State's Health* report.
2. Develop a plan to address the State of the State's health problems and improve the health of Oklahomans.
3. Emphasize the physician leadership role and responsibility in this process.

The Chairman of the Board of Trustees appointed a task force composed of representatives of different councils and the Alliance. In addition, the Board of Trustees specifically authorized the task force to initiate its public information activities to coincide with the release of the 1999 *State of the State's Health* report. Following two task force meetings, the OSMA sponsored a media event in conjunction with the Oklahoma State Health Department at the State Capitol. This event generated significant interest from both the print and electronic media.

On March 13, the task force held a retreat with a facilitator. A proactive, a strategic campaign content plan, a name for the campaign, and an appropriate recommendation for the OSMA Board of Trustees and House of Delegates was developed.

The State of the State's Health report's data and recommendations form the foundation for which the "Physician's Campaign for a Healthier Oklahoma" is based, in compliance with the OSMA

mission statement, "to promote the best health for the people of Oklahoma and a professional, ethical and a compassionate manner by advocating for patients, representing physicians and promoting the art and science of medicine" and the first goal of the OSMA Long Range Plan. The Task Force identified five strategic priorities the campaign should address:

1. Prevention
2. Education
3. Coalition building
4. Initiatives/programs/services
  - addressing prevention, education and coalition building
5. Process and outcome evaluations
  - to determine the effectiveness of the Campaign and to modify it on an annual basis.

Furthermore the Task Force felt that these five strategic priorities should be initiated in the Campaign at three different levels:

1. State (Oklahoma State Medical Association)
2. Community (county medical societies)
3. Individual physicians (offices)

#### Recommendation

It is the recommendation of this Task Force that the Oklahoma State Medical Association House of Delegates and the Board of Trustees endorse and support the report of the Task Force and authorize the further development and implementation of the plan for the "Physicians' Campaign for a Healthier Oklahoma."

Respectfully Submitted,  
Robert J. Weedn, MD, Chair  
Sara R. DePersio, MD, Vice-Chair  
Gordon H. Deckert, MD  
Mary Anne McCaffree, MD  
George W. Prothro, MD  
Gary F. Strebel, MD  
Hal B. Vorse, MD  
Edward N. Brandt, MD  
David M. Nierenberg, MD  
John C. Leatherman, MD

## ■ REPORT OF THE ORGANIZED MEDICAL STAFF SECTION

#### ADOPTED

Reference Committee II (A-99)

Subject: Annual Report

Presented by: William O. Coleman, MD, Chair

Referred to: Reference Committee II

#### Introduction

The OSMA Organized Medical Staff

**Strategic Focus Areas  
Physicians' Campaign for Healthy Oklahomans  
Oklahoma State Medical Association**

**PREVENTION**

**State**

- Evaluate existing programs in other states that have improved the health of their communities. Find "best practices" and models that could be replicated within the state i.e. Put Prevention into Practice (PIIP) and promote their utilization
- Disseminate the information contained in the State of the State's Health Report.
- Create and distribute campaign literature to include: posters, pamphlets and flyers for use in the physician office, community, and state level.
- Involve the citizens, along with the physicians, in promoting wellness.
- Support existing and help develop new community-based programs.
- Develop statewide collaborative initiatives between public and private organizations.
- Advocate ongoing evolution of our medical educational curriculum and resident programs to ensure inclusion of prevention components.
- Conduct a media campaign with structured pockets of information outlining "ready responses" for physicians/others who will be informing the public about the state of the state health report.
- Target high risk areas, i.e. children and adolescents, focusing on prevention rather than illness.
- As part of the Campaign, develop state legislative initiatives.
- Encourage utilization of these websites as resources for the public and professional:  
OSMA Website: [www.osmoonline.org](http://www.osmoonline.org)  
OSDH Website: [www.health.state.ok.us](http://www.health.state.ok.us)
- Develop CME in prevention and lifestyle education.
- OSMA Exhibits i.e. health fairs, conferences.
- OSMA Volunteer Speakers Bureau - seminars, conferences.
- OSMA Newsletter, Journal, Week in Review as communication tools for these activities.
- Develop support service capability for community health initiatives.

**Community**

- Recruit retired physicians to play an active part in the campaign and serve as volunteers to the various programs in the community that support wellness.
- Conduct a public campaign with pockets of information outlining "ready responses" for physicians/others who will inform the public about the state of the state health report.
- Target high risk areas, i.e. children and adolescents, focusing on prevention rather than illness.
- Advocate with local legislators for continued budget support for public health.
- Explore the creating of systems that build alliances between the health department, possibly creating regions within the state which could be supported by private as well as public resources, i.e. Robert Wood Johnson Foundation, Kellogg.

**Individual Physicians Office**

- Utilize information regarding the PIIP Program and the other materials that are available as preventive medicine resources to the physicians.
- Advocate for state health initiatives with local legislators.

**EDUCATION**

**State**

- Provide education for physicians in health promotion, lifestyle/behavior modification.
- Develop and implement a Volunteer Speakers Bureau - Sponsor and develop media spots on various health issues.
- Investigate and/or sponsorship of statewide radio and television programs targeting educational stations, cable stations, but considering all media outlets.
- Encourage state dissemination of the Schools for Healthy Lifestyles Program first developed by the Oklahoma County Medical Society.

**Community**

- Promote health education in existing and new community partnerships such as Turning Point.
- Develop and use pre- and post- tests for audiences where group education is presented.
- Develop Schools for Healthy Lifestyles in local communities.

**Individual Physicians Office**

- Local physician offices supporting on-going awareness building programs with a focus on lifestyle changes.
- Advocate advertisements, media, and posters at the local office sites.
- Utilize patient self assessment questionnaires both to teach and to stimulate individual responsibility.
- Participate in "Adopt a Doc" in Schools for Health Lifestyles Programs.

**COALITION BUILDING**

**State**

- Develop potential relationships within the state but not limited to:  
OSMA Alliance  
Health Professional Associations  
State Chamber of Commerce  
State Health Department  
State Department of Education  
Oklahoma Hospital Association  
Statewide Hospital System  
Health Maintenance Organizations and Other  
Insurance Companies

**Community**

- Develop potential relationships within the community but not limited to:  
County Medical Alliance  
City Chamber of Commerce  
County Health Department  
Local School Districts  
Local hospitals  
County Extension Agents  
County Boards of Health  
Local School Boards  
Employees

**Individual Physicians Office**

- Advocate partnerships and relationship building both at the intra-office level and the inter-office level to promote health wellness.
- Encourage collaborative effort between physicians and office personnel.

**Strategic Focus Areas**  
**Physicians' Campaign for Healthy Oklahomans**  
**Oklahoma State Medical Association (continued)**

**INITIATIVES, PROGRAMS, SERVICES**

**State**

- Develop new and sustain existing and on-going health promotion programs (i.e., Stroke Prevention; Substance Abuse, Tobacco Coalition, etc.) through:
  - Articles
  - Programs
  - Newsletters
  - Journals
  - Clinical prevention pockets

**Community**

- Develop and sustain on-going programs through:
  - Articles
  - Programs
  - Journals (Okla. and Tulsa Co.)
  - Clinical prevention pockets
- Promote the utilization of statewide initiatives, programs, and services of the community level.

**Individual Physicians Office**

- Encourage utilization of existing and on-going health promotion programs through:
  - Posters
  - Pamphlets
  - Billing stuffers

**EVALUATION AND OUTCOME**

**State**

- Process evaluation: participation and education with ongoing review of existing programs.
- Synthesize the existing data from various resources such as The State of the State's Health Report, Behavioral Risk Factor Survey (BRFS), Youth Risk Behavior Survey (YRBS), epidemiology reports, and health literacy issues annually to evaluate trends in outcomes.
- Create a database comparing the process and outcome evaluations mentioned above.
- Survey physicians as to their acceptance, utilization and response to the Physicians' Campaign for a Healthier Oklahoma.

**Community**

- Process evaluation: participation and education with ongoing review of existing programs.
- Continue promotion and assessment on an annual basis to measure effectiveness.
- Create a database comparing the process and outcome evaluations mentioned above.

**Individual Physicians Office**

- Process evaluation: participation and education with ongoing review of existing programs.
- Continue promotion and assessment on an annual basis to measure effectiveness.
- After implementation of PPIP, create an on-going system of measurement that will help compare trend impact.
- Create a database comparing the process and outcome evaluations mentioned above.

The attached table outlines the initiative that the Task Force delineated in the five strategic focus areas mentioned and at the three specified levels of action. It is the hope of the Task Force that the "Physicians' Campaign for a Healthier Oklahoma" will heighten the public and individual patient's awareness of health issues, stimulate interest and provide education and motivation that lead to appropriate interventions by and for the people of Oklahoma.

Section was originally called the Hospital Medical Staff Section (HMSS). In June of 1995, the OSMA-HMSS was changed to the Organized Medical Staff Section (OMSS). It now credentials representatives from hospital medical staffs, as well as other organized medical staffs from managed care groups.

The purpose of the Organized Medical Staff Section is to provide a forum for addressing common issues between physicians and organized medical staffs throughout Oklahoma. The OSMA-OMSS maintains communication, develops policy recommendations, and establishes and maintains relations with federal and state government entities having statutory or regulatory jurisdiction affecting organized medical staffs. The Section communicates its activities directly to the Board of Trustees and House of Delegates, as well as to the AMA-OMSS.

**Review of Activities**

On June 11-14, 1998, the American Medical Association Organized Medical Staff Section (AMA-OMSS) met in Chicago, IL. It was attended by the following representatives from Oklahoma: William O. Coleman, MD, Chair, OSMA-OMSS; Clarence Robison, MD, Caucus Chair, OSMA-OMSS; and William G. Bernhardt, MD, AMA Alternate Delegate from Oklahoma.

The Governing Council of the OSMA Organized Medical Staff Section met October 4, 1998 at OSMA Headquarters. The agenda included: a review of the AMA-OMSS 1998 Assembly Meeting summary; discussion of the then upcoming AMA Interim meeting in Hawaii; the Section's views/concerns regarding the JCAHO Sentinel Event Policy; physician's ability to collectively negotiate; and peer review privilege.

Due to schedule conflicts, a Delegate and/or member of the OMSS Section was not able to attend the 1998 AMA Interim meeting.

On March 10, 1999, the OSMA-OMSS met at OSMA Headquarters and took the following actions:

**Elections**

- William O. Coleman, MD, will continue as Chair of the OMSS
- Clarence Robison, Jr., MD, will act as Vice-Chair,
- Michael J. Schwartz, MD, was elected as the Organized Medical Staff Section Delegate to the OSMA House of Delegates Annual Meeting.

**Resolution**

Approved a proposed resolution on "Patient Choice in Medicare Reform."

Based on the positive experiences of the Federal Employee Health Benefit Plan, the resolution requests that an independent "Benefits Board" be created by Congress. Its membership would be selected by both the Administration and Congress. This body would specify the detailed benefits, subject to an up-or-down vote by Congress.

Elimination of the Organized Outpatient Hospital Clinic Provider Type.

A report from Marisa New, Director, Socio-Medical Economics and Health Care Policy on the elimination of the Organized Outpatient Hospital (OOHC) Provider Type was heard and then referred to the Council on Medical Services.

#### Other Business

Concerns centering around the relationships between medical staff and hospital administration relating to credentialing and peer review actions were discussed. Assistance is available to any new OMSS member in the form of OSMA-OMSS members and staff. The OSMA Legal Counsel and the "AMA-OMSS Physician Assistance Network Directory" are available to OMSS members as an information source. This directory represents peer counsel and resource information helpful to the OMSS member.

#### Conclusion

The OSMA Organized Medical Staff Section will continue to respond to the concerns of Oklahoma's Medical Staff Physicians and identify resources available for peer counsel as well as legal counsel.

#### Recommendation

The OSMA-OMSS recommends:

That the Oklahoma State Medical Association work to develop a State Department of Health rule or a legislative mandate that all physician credentials verification organizations be approved by the Oklahoma State Board of Health and certified as being in compliance with the uniform application rules as promulgated by the Oklahoma State Board of Health.

Respectfully submitted,

William O. Coleman, MD  
Chair OSMA-OMSS

### ■ REPORT OF THE COUNCIL ON RURAL HEALTH

FILED FOR INFORMATION

Reference Committee: II (A-99)

Subject: Annual Report

Presented by: Michael Boyer, MD,  
Chairman

Referred to: Reference Committee II

#### Introduction

The Rural Health Council provides a forum for rural physicians to meet and discuss health issues of importance specific to rural Oklahoma and to develop policy recommendations for consideration by the

Association, including, but not limited to, such topics as rural health care delivery, financing of medical services in rural areas, special problems of rural hospitals, recruiting physicians to rural areas, and the promotion and funding of special health care projects of interest to rural Oklahoma. The activities of the Council shall be governed by the Association's Annual Program of Activities as determined and interpreted by the Board of Trustees.

#### Review of Activities:

The Council on Rural Health met on Thursday January 7, 1999, to discuss the following issues:

##### *Trustee Re-apportionment:*

The Council on Rural Health reviewed the re-apportionment proposal submitted by the Constitution & Bylaws Committee at the 1998 House of Delegates meeting. The Council unanimously voted to accept the re-apportionment proposal as written. A recommendation was made for the Constitution & Bylaws Committee to make the necessary revisions and forward it to the 1999 House of Delegates for approval.

##### *SoonerCare:*

The Council discussed the SoonerCare program and how it is affecting health care across the State. Request was made for the Board of Trustees to be alerted to the discouragement felt by rural physicians. Recommendations were made to have OSMA's SoonerCare Task Force meet with the Rural Health Council and update the members regarding any changes being made to Sooner Care. A related recommendation was also made to have the Hassle Factor Log available on the OSMA web site so physicians could send reports via e-mail.

##### *Oklahoma State and Education Employees Group Insurance Board (OSEEGIB):*

The Council discussed the OSEEGIB blast fax sent to all physician members and the need to begin a dialogue with the State Legislature about this outrage. Recommendations were made for the Legislative Council to look at Sooner Care and OSEEGIB and possibly make decisions regarding OSMA's plan for future action on these two issues.

The Rural Health Council submitted the Re-apportionment proposal to the Board of Trustees in January.

#### Conclusions

The Rural Health Council will continue to work with the physicians in the state of Oklahoma both rural and urban. The Council will also work closely with the Council on State Legislation and Council on Medical Services.

Respectfully submitted:

Michael Boyer, MD, Chairman, McAlester  
Joel Anderson, MD, Okmulgee  
Jack Beller, MD, Norman  
Rosemary Bellino, MD, Lawton  
Chester Bynum, MD, Norman  
Carl Critchfield, MD, Muskogee  
Billy Dale Dotter, MD, Okeene  
Roy Doty, MD, Ada  
James Gerber, MD, Okarche  
Jay Gregory, MD, Muskogee  
Carl Hook, MD, Norman  
John Leatherman, MD, Woodward  
Jay Leemaster, MD, Moore  
Robert Phillips, MD, Stillwater  
Fred Ruefer, MD, Muskogee  
David Russell, MD, Enid  
David Selby, MD, Enid  
Bruce Storms, MD, Chickasha  
Mike Talley, MD, Okeene  
Debbie Te, MD, Guymon  
Thomas Tryon, MD, Miami  
Robert Weedn, MD, Duncan  
Richard B. Winters, MD, Poteau  
Richard L. Winters, MD, Poteau  
Treva Graham, Medical Student

### ■ REPORT OF THE MEDICAL STUDENT SECTION

FILED FOR INFORMATION

Reference Committee II (A-99)

Subject: Annual Report

Presented by: Betsy Jett, Chair

Referred to: Reference Committee II

#### Introduction

The OSMA Medical Student Section consists of 262 members from the OU College of Medicine at the Health Sciences Center and the OU College of Medicine in Tulsa. The OSMA Medical Student Section is the largest extracurricular group on the Oklahoma City campus. The purpose of the Section is to introduce students to organized medicine and the issues that affect the practice of medicine.

#### Review of Activities

The Section continues to sponsor a welcoming picnic for the first year medical students and their families. This year the event was held at the Bricktown Ballpark and was attended by over 300 students.

faculty members, and guests.

This year the Section began a physician mentor program. Students were assigned a physician mentor who they may contact with questions or for further information about the importance of becoming involved in organized medicine. Sixty-one first year students participated in the program.

The Section continues to sponsor monthly luncheons for the membership with speakers on topics ranging from legislative issues to public health concerns. Small group Roundtable Luncheons are also held at the Faculty House to address topics not covered in the traditional medical school curriculum. The Tulsa chapter is actively working with the osteopathic school on the establishment of an OSMA chapter.

OSMA medical student members attend Council, Committee, Board of Trustee, and House of Delegate meetings.

Oklahoma medical students from both campuses continue to represent our state well at national and sectional meetings of the American Medical Association Medical Student Section.

This spring the Section will be hosting the 3rd Annual Residency Fair to be held on April 28. Approximately 800 residency programs from across the nation have been invited to come and introduce students to their program.

Respectfully submitted,  
Betsy Jett  
Chair, Medical Student Section

## ■ REPORT OF THE COUNCIL ON MEDICAL SERVICES

ADOPTED AS AMENDED  
Reference Committee II (A-99)

Subject: Annual Report  
Presented by: Jack J. Beller, MD, Chair  
Referred to: Reference Committee II

### Introduction

In its effort "to study, make decisions, and formulate activities with respect to the provision of medical care," the Council on Medical Services has primarily dealt with issues that assist our members in dealing with managed care. The Council met on July 6, 1998, September 15, 1998, October 18, 1998, January 5, 1999, and March 16, 1999.

### Review of Activities

#### 1998 HMO Report Card

The HMO report card tabulates the tax sta-

tus, contracting status with Medicare/Medicaid, year-end revenue, amount spent on patient care (including the amount spent for physician services), administrative expenses, and income/loss ratio. This data will be distributed through the OSMA *Journal* and/or the OSMA Newsletter with an explanation as to why this report was prepared.

#### Hassle Factor Log Program

The "Hassle Factor Log" has been distributed throughout the membership via the *Journal*, the newsletter, Council meetings, and through speaking engagements. Data has been collected from October 1, 1997, through March 1, 1999. Attached you will find the results. The results were separated into four focus areas: Hassles Reported by Program Type; Hassles by Hassle Type; Hassles by Carriers; and Hassles Reported by City. Of program types, commercial insurance and managed care plans were the greatest contributors of OSMA reported hassles. The most frequent complaints were delay of payment, numerous calls for single claim, other documents request, and excessive telephone hold. The majority of the hassles were reported from the Oklahoma City metropolitan area. The carriers that our physicians are more consistently having difficulty with were identified as Prudential and Aetna. The Council met on March 16 to review the tabulated results. More research will be done to determine the effectiveness of the program in other states. Data will be collected from March 1, 1999 to March 1, 2000. OSMA staff has presented information to the Radiology Business Managers Group in December to increase the awareness and importance of the program. The Council on Medical Services will disseminate this information to the membership via April 1999 Newsletter.

#### HMO Medical Directors Ad Hoc Committee

The Committee, chaired by Jack Beller, MD, is comprised of members of the Council on Medical Services as well as the medical directors of fourteen health care plans and the Executive Director of the Oklahoma Association of Health Care Plans. At the initial meeting, only six of the plan members attended. The Committee met again on September 10, 1998 to bring the Health Plan Medical Directors and the Oklahoma Chapter of the American Psychiatric Association together to discuss the issue of mental health parity. There were no HMO medical directors in attendance. The Council

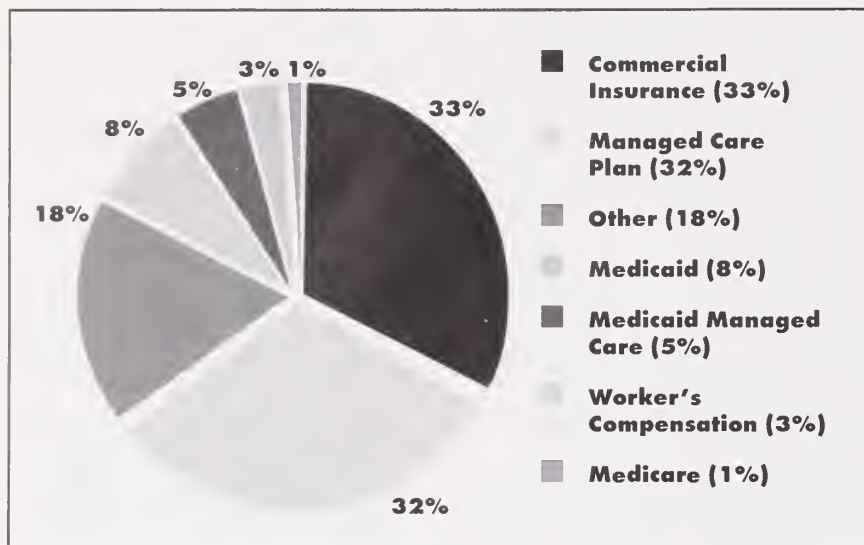
will continue to serve as a resource to the Council on State Legislation and Regulation on this matter.

Future meetings have yet to evolve secondary to lack of HMO medical director participation. The Council will discuss whether any future attempts will be taken to continue with the ad hoc group.

#### Florida Volunteer Health Care Provider Program (FVHCPP)

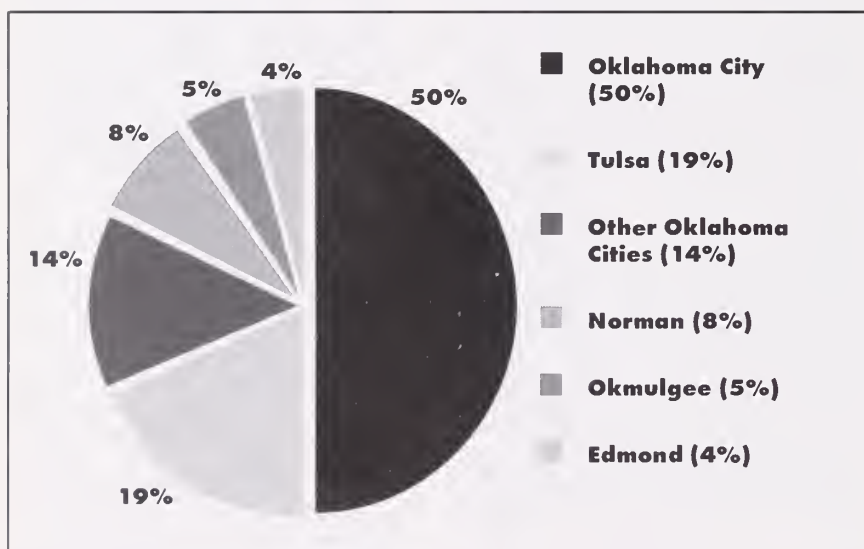
In accordance with a recommendation from its July 1998 meeting, the Council engaged in a discussion via teleconference with representatives from the FVHCPP and the Florida Department of Health. The Florida representatives discussed the genesis of the FVHCPP, which began in 1992 as an agreement between the Florida Medical Association (FMA) and Florida government to increase access to health care services for the indigent population up to 150 percent of the federal poverty level. It is a coordinated system of free care provided by physician volunteers who volunteer their services through their local county medical societies and/or district health departments. Funding, in most cases, is provided by the state. The money is used to pay for physician office visits or visits to a designated health care facility. In return, physicians who volunteer their services become "agents of the state" and receive sovereign immunity protection from the government. The program has been hugely successful in that many indigent patients now have access to a physician, and the state and FMA have been able to accurately document over thirty million dollars of free care provided to citizens of Florida since the program was implemented. The public relations benefit has been a "win-win" for both Florida physicians and the Florida government and physicians have little to fear in the way of lawsuits from indigent patients.

On November 11, 1998, a meeting took place with the Oklahoma State Health Department (OSDH). The OSMA would like to show the State Legislature that Oklahoma physicians have and will always be volunteering their time to provide indigent medical care. OSDH is currently working with some volunteer physicians through community health clinics. It remains unclear about the liability issues. Further research is necessary to verify malpractice protection. Additional concerns involve the availability of volunteer physicians who are unwilling to provide medical services in the rural areas since the implementation of managed care into the Medicaid system. Both parties are in



**Hassles Reported by Program Type**

• Figures only include logs that specified a program type



**Hassles by City**

agreement that the State Legislature will need to mandate funds to employ site coordinators/clerical staff for these physician volunteers. OSDH will further review the literature and arrange a meeting with the Florida Medical Association to completely understand the process and the results that have ensued in Florida.

*"Patient Access to Internist - Subspecialist in Gatekeeper Health Plans"*

At its October 18, 1998 meeting, the Council reviewed a 1995 position paper

developed by the former American Society of Internal Medicine (now ACP/ASIM) entitled, "Patient Access to Internist - Subspecialist or Gatekeeper Health Plans." This paper supports a position in favor of selected subspecialist physicians, with appropriate training and qualifications, having the right to be designated as both a subspecialist and primary care physician in the managed care setting. The Oklahoma Chapter of ACP/ASIM endorsed the ACP/ASIM position and asked for OSMA support in

Oklahoma. The Council directed OSMA staff to determine the position of the Oklahoma Association of Health Care Plans. The Oklahoma Association of Health Care Plans does not have an organizational position on this matter. Instead, it defers to its six individual members' health plans. The Council, in conjunction with the Oklahoma Chapter of ACP/ASIM, as well as through its Ad Hoc Committee on Medical Directors, will attempt to obtain the position of each of the fourteen health plans licensed to do business in Oklahoma to determine if this issue is a widespread problem. The Council subsequently prepared a resolution for consideration by the OSMA Delegation to the AMA. ~~Resolution 307 - Internal Medicine Subspecialists Functioning as Primary Care Physicians~~ was introduced at the 1998 AMA Interim Meeting and was adopted (with some change in wording) as policy of the AMA, as follows:

*Oklahoma State Education and Employees Group Insurance Board (OSEEGIB) Fee Schedule Changes*

In December, OSEEGIB accepted a series of recommendations that would eliminate fee disparities relative to Medicare, these being RBRVS-like fee changes. The changes will affect physician, ancillary, and anesthesiology services as follows:

Reduce all Oklahoma fees (except 70000-89999 and 91000-95999) that are above 150 percent of Medicare to 150 percent of Medicare. Maintain all fees that are between 105 percent of Medicare to 150 percent of Medicare. Increase all fees that are below 105 percent of Medicare to 105 percent of Medicare. Fees for 70000-89999 and 91000-95999 (radiology, lab and medical diagnostic procedure) are 120 percent of Medicare.

No changes are recommended for the reimbursement methodology for anesthesiology services at this time.

The overall fiscal impact for this model will be a decrease in payments to physicians amounting to \$10,000,000. Inpatient payments to hospitals will increase by \$1,500,000 and outpatient payments to hospitals will decrease by \$8,300,000.

On December 21, 1998, information was sent via OSMA blast fax notifying the membership that OSEEGIB would be making these changes to their fee schedule in the near future.

On January 21, 1999, OSMA sent a letter to OSEEGIB strongly requesting the new changes in the OSEEGIB contract with physicians be placed on indefinite hold. The concern was as follows: following a review of the CHPS (OSEEGIB Consultants) Executive Summary, the numerical basis for the changes appeared flawed. Consequently, the consultants' recommendations were questioned.

On February 11, 1999, OSMA hosted a meeting with OSEEGIB (Odie Nance, administrator and Randy Ross, deputy administrator). Our formal requests mentioned in the 1/21/99 letter were discussed. OSEEGIB stated that: 1) the changes in the contract with physicians will become effective April 1, 1999; 2) Carol Bowman will be OSEEGIB's staff contact person regarding contract concerns; and 3) OSEEGIB will provide the OSMA a copy of the CHPS analysis.

On March 16, 1999, the Council on Medical Services was updated. As of this writing, OSMA has received a copy of the CHPS analysis. Several interested physicians will be contacted to review the material. The information will be brought back to the Council on Medical Services for further discussion and a course of action will be determined.

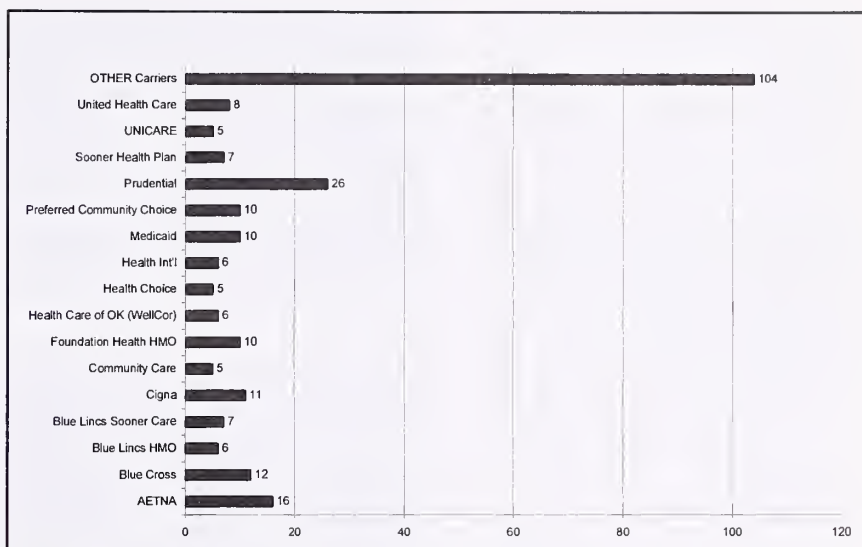
OSMA and OHA have submitted legislation through SB 439. This bill requires OSEEGIB to schedule hearings and provide notification to providers prior to adopting any change in the method of contracting with physicians.

OSMA has been in frequent contact with the State Capitol to determine when and/or whether an OSEEGIB Legislative Oversight Committee will be appointed as stated in 1998 legislation passed in HB 2290.

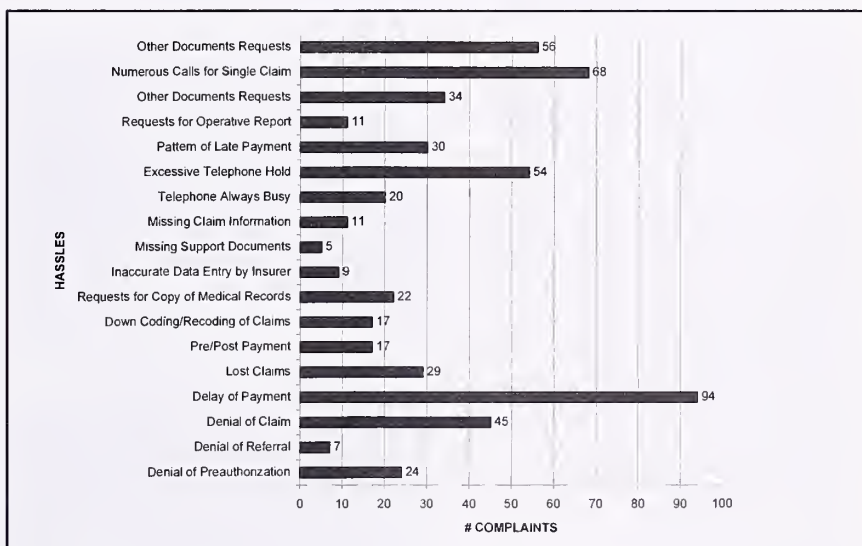
#### *Fraud and Abuse*

Proposed that OSMA legal counsel (Hartzog, Conger & Cason) look into the possibility of developing a Fraud & Abuse Compliance Program that can expeditiously be implemented within physicians offices. The first draft of a "Fraud and Abuse Compliance Policy" has been created. Legal counsel states that posed with a government audit, the first request will be to produce a written policy. Following a meeting with legal counsel, the Council on Medical Services will be briefed on the development of the project.

**AMA Resolution 719- Definition of "Medical Necessity"**- the AMA Council on Medical Service requested the OSMA provide input as they take up this issue in



**Hassles by Carrier**



**Hassles by Hassle Type**

preparation for a report to the AMA House of Delegates at the December Interim Meeting. Perry Lambird responded to the letter. He clarified the resolution's intent.

#### *HCFA Documentation Guidelines for Evaluation and Management Services*

Following a fly-in AMA Meeting in Chicago, Jack Beller, MD, Chair, Council on Medical Services, updated the Council. The final resolution was distributed to all members.

The AMA is in the process of working with HCFA to decrease the threat for fraud and abuse contained in the previously proposed E&M guidelines. With the collaborative changes, the Council believes that the new proposal continues to be too complex for practical physician office use. The old framework was soundly repudiated by the AMA House of Delegates in June 1998. The new framework published in October 1998 should also be rejected. Jack Beller, Chair, Council on Medical Services, suggested to the AMA, that a

completely new framework be developed to address evaluation and management documentation. The above expressed concerns were contained in Substitute Resolution 804 which was introduced and approved as policy by the AMA House of Delegates in December 1998.

#### Resolutions to 1999 HOD Meeting

Two resolutions have been introduced:

##### 1. "Uniform Credentials Verification Application Process"

Summary: OSMA to promote legislation requiring all Credentials Verification companies be approved by the State Department of Health and be in compliance with the uniform rules promulgated by the State Department of Health.

##### 2 "HCFA Assault"

Summary: OSMA, through PLICO, or other appropriate means should prepare to defend all accused physician members. A database of questionable HCFA activities is maintained so that the OSMA can provide appropriate review:

#### Conclusion

I would like to express my appreciation to the Council members for their time and dedication to serve.

Respectfully submitted,

Jack J. Beller, MD, Chair

William O. Coleman, MD, Vice-Chair

Joel Anderson, MD

Donald Baldwin, MD

Michael Boyer, MD

John R. Christiansen, MD

James Claflin, MD

Glenn P. Dewberry, Jr., MD

Guy Fuller, MD

Susan Harmon, MD

Mark A. Kelly, MD

Perry A. Lambird, MD

Dennis R. Mask, MD

Mary Anne McCaffree, MD

John R. Perkins, MD

Larry Ramseyer, MD

Donald R. Stout, MD



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## REFERENCE COMMITTEE III

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### ■ REPORT OF THE COUNCIL ON GOVERNMENTAL ACTIVITIES

#### ADOPTED

Reference Committee: III (A-99)

Subject: Annual Report

Presented by: Richard J. Boatsman, MD,  
Chairman

Referred to: Reference Committee III

#### Introduction

The Council on Governmental Activities reviews federal legislation and regulations of concern to the medical profession or the health care industry, and initiates activities or undertakes appropriate responses on matters of priority interest. It also establishes and maintains relations with federal government entities having statutory or regulatory jurisdiction affecting the medical profession, the delivery of health care, or the public health. In cooperation with other Association councils and committees, it communicates with the medical profession, develops policy recommendations for consideration by the Board of Trustees, and prepares testimony and otherwise conducts the federal legislative program of the Association. The activities of the Council are governed by the Association's Annual Program of Activities as defined and interpreted by the Board of Trustees.

#### Review of Activities

The Council on Governmental Activities met on April 25, 1998, during the Annual Meeting at the Oklahoma City Marriott. Dr. Boatsman introduced John Montgomery, OSMA's federal lobbyist and praised him for his excellent work keeping the OSMA informed on federal matters. Mike Hesse, the AMA's regional political director, was also in attendance. Updates on the major health care legislation dealing with the Patient's Bill of Rights and the AMA Leadership Conference in Washington, DC, were provided.

Representing the Council on Governmental Activities, Dr. Boatsman attended a meeting of the OSMA Long Range Planning Committee on January 16, 1999. Following that meeting a conference was held with both Terry Carr, AMA's assistant director of congressional affairs, and Richard Deem, the AMA's vice-president of government affairs, to discuss selective legislative matters. In particular, Senator Nickles' office had requested input from the

OSMA on his bill dealing with physician-assisted suicide. Dr. Ed Brandt voiced several good ideas regarding the form that the legislation might take. The conclusion was reached that the Council on Governmental Activities would meet by conference call, the purpose of which would be to draft a response. February 8, 1999, was selected as the most popular date. Dr. Boatsman prepared a draft of the letter of response dealing with the physician-assisted suicide bill, as well as other important items of legislation, including patient protection bills. This was distributed in advance to all members of the Council. Attending the conference call in addition to Dr. Boatsman were: Mary Anne McCaffree, MD; David M. Selby, MD; Sara DePersio, MD; Gary Paddack, MD; Boyd O. Whitlock; Cheryl Baker, John Montgomery, Terry Carr, Kinn Elliott, Brian O. Foy, Kathy Musson, and Lydia Shirley. The Council suggested several changes in the letter and authorized Dr. Boatsman to incorporate those changes. This was done and the letter was then submitted to Dr. McCaffree for final modification, and was sent out on February 15, 1999.

The Council will continue to work closely with the Oklahoma Congressional Delegation on issues of importance to physicians and their patients. The OSMA has a close working relationship with the members of the Oklahoma Congressional Delegation. We have access to all members of our Delegation, and individual physician relationships with our U.S. Senators and U.S. Representatives are extensive. John Montgomery, our federal lobbyist, has been very helpful to our efforts, and his report is attached as a supplement to this report.

Another ingredient in the successful federal strategy is the regular presence of OSMA members in Washington. OSMA representatives visit Congress personally at least once a year and on an as-needed basis.

#### Recommendations

1. All OSMA members should contribute to the Oklahoma Medical Political Action Committee (OMPAC) and the American Medical Political Action Committee (AMPAC).
2. Physicians interested in federal legislation and regulatory activity should advise the President of the OSMA of their interest in the activities of the Council.

3. Physicians should become involved in the grassroots efforts to get to know their congressmen personally and to call on them when critical issues arise in Congress.

#### Conclusions

The Council on Governmental Activities will meet again at the Annual Meeting on Saturday, April 17, 1999, at 7:30 a.m. in Tulsa. The AMA Regional Political Director for Oklahoma, Kinn Elliott will be in attendance to update the Council on AMA activity with regard to federal legislation.

Respectfully submitted,

Richard J. Boatsman, MD, Chairman  
David M. Selby, MD, Vice Chairman  
Cheryl Baker  
Edward N. Brandt, Jr., MD  
Sara DePersio, MD  
Jay Gregory, MD  
C. Wallace Hooser, MD  
Perry Lambird, MD  
John Leatherman, MD  
Stephen Lester, MD  
John Nettles, MD  
Gary Paddack, MD  
Victor Robards, Jr., MD  
Johnny Roy, MD  
Lee Schoeffler, MD  
Anthony Sebastian, MD  
Jeff Shaver, MD  
Gary Strebel, MD  
Sherry Strebel, MD  
Kenneth Whittington, MD

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#### ATTACHMENT

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To: Oklahoma State Medical Association  
From: John H. Montgomery  
Subject: Federal Legislative Update  
Date: March 22, 1999

This report is provided as a supplement to the Report of the Council on Governmental Activities to detail the activities of our firm over the past year.

Health care legislation has become a major issue during the first two months of Congress. The following is a brief summary of major Congressional health care legislative initiatives.

**Managed Care Regulation** The Republicans and Democrats are continuing to hold closely to their positions at the end of the last Congress. The Senate bill (S. 300) by Senator Jeffords (R-VT) requires creation of internal and external appeals processes for all patients in managed care and other health

plans and provide other protection to the estimated 48 million Americans in "self-insured" plans exempt from state regulations. It does not address the ERISA issues. In the first mark-up of the bill, the Senate Health, Education, Labor and Pensions Committee rejected the Democrats' Patient Bill of Rights proposal requiring broader coverage of emergency room care, freer access to specialists, including specialists for children, minimum hospital stays for women undergoing mastectomies for breast cancer and access to clinical trials for those with life threatening diseases. The Republican Plan requires the "point of service" option, but only for plans covering more than 50 enrollees. In addition, the Republicans rejected the Democrats' proposal for both liability lawsuits and having doctors rather than health plans determine medical necessity.

Our position is set forth in the OSMA letter of February 12, 1999, sent to Senator Don Nickles. This debate will continue in the House, in the Senate Finance Committee and on the Senate floor throughout the spring.

**Medicare Commission** The Medicare Commission's recommended reform proposal did not get the required eleven votes despite the fact that Senators Breaux and Kerrey voted with the Republicans to make it a 10-7 majority. The Republicans and Senator Breaux intend to move a bill utilizing the Breaux proposal to shift Medicare to a "premium support" program in which government would pay a percentage of private plan premiums for beneficiaries who opted out of the traditional program.

President Clinton, to most people's surprise, has committed to submitting his own reform proposal as an alternative to the Breaux proposal. This should be out by mid April.

**Other Issues** The Campbell Antitrust bill will be introduced, the Nickles Lethal Drug Abuse Prevention Act will be reintroduced with our comments being considered. Congressman Watkins has introduced H.R. 1046 which expands the eligibility of chiropractic procedures under Medicare, and the Congressman Norwood proposal for the use of tax credits for health care insurance has been introduced. The Private Contracting issue on restricting physicians from receiving Medicare payments for two years if they accept private contracts for the same services has not been addressed by either the Senate or the House committees so far this year.

We continue to work with the health care staff assistant in each Oklahoma Congressional office and to use our

February 12th letter to Senator Nickles to define our position on Managed Care Reform and the Lethal Drug Abuse Prevention Act proposal.

## ■ REPORT OF THE COUNCIL ON STATE LEGISLATION AND REGULATION

FILED FOR INFORMATION

Reference Committee: III (A-99)

Subject: Annual Report

Presented by: Edward N. Brandt, Jr., MD,  
Chairman

Referred to: Reference Committee III

### Introduction

The first session of the Forty-Seventh Legislature convened Monday, February 1, 1999. The House and the Senate combined filed 1756 pieces of legislation. At the beginning of the session, OSMA was tracking over 200 bills related to health care, insurance and other areas of interest to medical doctors and their patients; several of these bills were initiated by the OSMA.

A reorganization of the OSMA legislative team took place this year. Lynne White, OSMA's chief lobbyist enlisted the assistance of Kenneth Nance, specifically to help with the Peer Review legislation. Kathy Musson still serves as the Director of Governmental Activities, and her new assistant is Lydia Shirley, who serves as staff liaison to the Council, as well as a contract employee, Jason Ziesch, who is a legislative assistant. Judy Lake still serves as OMPAC assistant.

The Council on State Legislation and Regulation has met bi-weekly regularly since January 12, 1999, and will continue to meet as needed up until Sine Die, May 28.

### Review of Activities:

#### 1998 Legislative Session Overview

The 1998 legislative session produced 2076 bills to wade through. Of those measures, 434 were signed into law by Governor Frank Keating, eight were line item vetoed, and 145 were resolutions that went directly to the Secretary of State. The OSMA did well in 1998. The Association introduced several pieces of legislation and strongly supported a number of others. A brief description of the major OSMA initiated bills follows:

#### Bills Strongly Supported by OSMA

✓ **HB 1602, "The Oklahoma Patient Care Quality Improvement Act,"** by Russ Roach of the House and Brad Henry of the

Senate, was a joint effort by the OSMA and the Oklahoma Hospital Association (OHA). HB 1602 provided for protection of confidentiality of sensitive information exchanged during a hospital's current quality improvement process. The bill passed the House and the Senate Judiciary Committee, chaired by the Senate author with the agreement that it would go to a joint conference committee. It was determined that the bill violated the three year moratorium on tort reform which expired at the end of this session. The peer review issue is of major concern for the OSMA and the OHA and we are working together in the 1999 session to seek meaningful protection of peer review information.

✓ **HB 2280, "SoonerCare Task Force,"** by Sean Voskuhl of the House and Bernest Cain of the Senate. Creating the 21-member Advisory Task Force on SoonerCare until February 15, 1999. The Task Force will study and make recommendations to elected officials on patient education regarding access, utilization of emergency medical services, eligibility, physician assignments, access to services, equitable reimbursement rates for emergency room screening, and address patient and provider educational endeavors necessary for expansion of SoonerCare to the aged, blind and disabled and Title XXI populations. Of the twenty-one (21) members, six (6) will be medical doctors or osteopathic physicians, three (3) primary care and three (3) emergency room selected from a list provided by statewide organizations representing allopathic or osteopathic physicians. *Signed by the Governor on May 11, 1998. Effective immediately.*

✓ **HB 2578, "Standardized Application Form,"** by Betty Boyd of the House and Brad Henry of the Senate. HB 2578 requires the State Board of Health to promulgate rules for the purpose of developing a uniform, standardized application form for use in the credentialing and recredentialing of health care providers. The bill was amended to allow for supplemental information to be requested by those initiating the form.

**HB 2578** also changes the membership of the **Oklahoma Breast Cancer Prevention and Treatment Advisory Committee**, which will in the future be advisory to the Department of Health, by reducing the number of appointments made by the Governor, the Speaker, and the President Pro Tempore from five (5) to four (4) each and giving the Commissioner of Health four (4) appointments from the Oklahoma Breast and Cervical Cancer Task Force. The Committee

will meet twice a year instead of quarterly. The bill establishes the Breast Cancer Act Revolving Fund at the Department of Health to replace the one at the Oklahoma Center for the Advancement of Science and Technology. The revolving fund receives monies from the breast cancer special plate and income tax check off. All expenditures from the revolving fund must be considered by the Advisory Committee and all research projects using monies from the fund are subject to peer review. *Signed by the Governor. Effective date July 1, 1998.*

✓ **HB 2599**, by Mike Thornbrugh of the House and Howard Hendrick of the Senate, was a joint effort by the OSMA and the Oklahoma Hospital Association (OHA). HB 2599 was intended to amend existing statute exempting "off label" use of drugs and medical devices for medical practitioners. The bill passed the House and was withdrawn from consideration by the OHA and the OSMA upon the advice of counsel representing a hospital involved in litigation on the issue.

✓ **HB 3169, "The Genetic Nondiscrimination Act,"** by Betty Boyd of the House and Penny Williams of the Senate. HB 3169 prohibits health insurers from, directly or indirectly, requiring or requesting from an individual or family member genetic testing or using information obtained from genetic testing to determine eligibility, establish premiums, limit coverage, renew coverage, terminate coverage or any other underwriting decision in the connection with the offer, sale or renewal or continuation of a policy, except to the extent and in the same fashion as an insurer limits coverage, or increases premiums for loss caused or contributed to by other medical conditions presenting a degree of risk. A genetic test shall not include family history, results of a routine physical exam or test, results of chemical, blood or urine analysis, results of a test to determine drug use, HIV, or results of any other commonly accepted test used in clinical practice.

Individuals damaged by an insurer's violation may recover in a court of equitable relief, including a retroactive order directing the insurer to provide insurance coverage to the damaged individual under the terms and conditions which would have applied had the violation not occurred.

**Employers:** no employer shall seek to obtain, or use a genetic test or genetic information of the employee or prospective employee; or require a genetic test or genetic information for the purposes of distinguishing between and discriminating against or restricting any right or benefit otherwise due or available to an employee

or prospective employee, other than in connection with the determination of insurance coverage or benefits. Employers, upon conviction, who violate this act shall be guilty of a misdemeanor and may be punished by a fine of not more than \$25,000 and/or by imprisonment in a county jail for not more than one year. **Persons who maintain genetic information** shall not be compelled to disclose information in any judicial, legislative, or administrative proceeding unless (1) the request for compulsory disclosure is in accordance with a court-ordered paternity test; (2) the individual whose genetic information is requested is a party to a proceeding and the genetic information is at issue; (3) the individual was insured under a policy and the policy as well as the information is at issue; and (4) genetic information is for use in a law enforcement proceeding or investigation or in instances where an insurer anticipates or is reporting fraud or criminal activity. *Signed by the Governor. Effective date July 1, 1998.*

✓ **SB 840**, by Brad Henry of the Senate and Abe Deutschendorf of the House, amends the "Oklahoma Do-Not-Resuscitate Act," by inserting a new section to allow the parent or guardian of a minor child to notify the attending physician based on information sufficient to constitute informed consent, does not consent to the administration of cardiopulmonary resuscitation in the event of the minor child's cardiac or respiratory arrest and such notification has been entered into the minor child's medical records. SB 840 also provides for revocation of the DNR consent. Although physicians have expressed concern about several provisions for minor children and DNR. *Signed by Governor on April 4, 1998. Effective immediately.*

#### **SB 1192, Laser Surgery by Optometrists Strongly Opposed by OSMA**

✓ **SB 1192**, by Mike Morgan of the Senate and Dale Wells of the House, authorizes optometrists to perform laser surgery procedures, excluding retina, laser in-situ keratomileusis (LASIK), and cosmetic lid surgery. SB 1192 also states that nothing in this title shall be construed as allowing any agency, board, or other entity of this state other than the Board of Examiners of Optometry to determine what constitutes the practice of optometry. The first week of the Legislative Session the OSMA was notified that the *optometrists dropped their appeal* to the Oklahoma Supreme Court. On July 7, 1997, the District Court of Oklahoma County held that laser procedures constitute surgery and that the practice of optometry does not include the

authority to perform procedures on the human eye with lasers. Despite intensive lobbying efforts by the OSMA, Oklahoma Osteopathic Association, the Oklahoma Academy of Ophthalmology, and the American Academy of Ophthalmology, there was little doubt of the outcome of the bill, due to political pressure from grassroots efforts of optometrists. *Signed by the Governor. Effective November 1, 1998.*

#### **Mental Health Parity Supported by OSMA**

During the interim The State Chamber of Commerce and Industry convened a committee to study mental health parity. The OSMA participated in the committee.

✓ **HB 2947, "Mental Health Parity,"** by Wallace Collins of the House and Angela Monson of the Senate. HB 2947 required group health insurance and health benefit plans to offer coverage for severe mental illness equal to the benefits for other physical diseases and disorders as an option to enrollees. Groups of 25 or fewer employees were exempt. After the unsuccessful attempt to override the Governor's veto of SB 1059, *HB2947 died in Joint Conference Committee.*

✓ **SB 1059, "Mental Health Parity,"** by Angela Monson of the Senate and Mark Seikel of the House. SB 1059 required group health insurance or health benefit plans, including State and Education Employees Group Insurance, indemnity plans, not-for-profit hospitals or medical service contracts, prepaid or managed care or provider arrangements, and Multiple Employer Welfare Arrangement (MEWA) or employer self-insured plans, except as exempt under ERISA to provide benefits equal to all other physical diseases and disorders for treatment of adults, adolescents and children with severe mental illness equal to the benefits for other physical diseases and disorders. Groups with 50 or fewer employees were exempt from the provisions of the bill. The provisions shall not apply to any agreement, contract, or policy which will have increased premium's cost of over 3 percent by the implementation of these provisions. The regulation and enforcement of this provisions. The regulation and enforcement of this provision were not "spelled out" in the bill and OSMA, although supportive of the legislation, was concerned about the lack of enforcement. *Vetoed by Governor; overridden in Senate; House failed to override May 13, 1998, Bill Failed.*

## Immunization Bills Supported by OSMA

✓ **SB887**, by Angela Monson of the Senate and Mark Seikel of the House, expands the list of immunizations required for children to attend day care or school to include the **varicella** vaccine. *Signed by the Governor on April 9, 1998. Effective immediately.*

✓ **SB 1239**, Angela Monson of the Senate and Mark Seikel of the House, requires the State Department of Education and the local school boards to provide for release to the Oklahoma Health Care Authority immunization records of school children covered under Title XIX or Title XXI who have not received the required **immunizations** at the appropriate time. The Health Care Authority shall provide the information to medical providers serving these children in an effort to increase the rate of immunizations. The provisions of this bill do not prohibit or affect the eligibility of any child to receive benefits under Title XIX or Title XXI. *Signed by the Governor. Effective date November 1, 1998.*

✓ **SB 1400**, by Kelly Hancy of the Senate and Jim Hamilton of the House, expands the list of immunizations required for children to attend day care or school to include the hepatitis A vaccine. *Signed by the Governor. Effective date November 1, 1998.*

## Smoking Cessation Bill Supported by OSMA

✓ **SB 1321**, "Smoking Cessation," by Angela Monson of the Senate and David Braddock of the House. SB 1321 provided that the Oklahoma Health Care Authority shall provide coverage for medically directed and supervised treatment for smoking cessation limited to a 12 week period and shall not include nicotine gum pursuant to a waiver approved by the Health Care Financing Administration. The bill was vetoed by the Governor because of the limits placed on smoking cessation treatment. In SB 923, Health Care Authority appropriations, \$145,000 was appropriated for smoking cessation treatment. *Vetoed by the Governor on June 11, 1998.*

## Licensure Boards

✓ **HB 2542**, "Partial-birth Abortion," by Charles Gray of the House and Trish Weedn of the Senate, prohibits a procedure defined as an abortion in which the person performing the abortion partially vaginally delivers a living fetus before killing the fetus and completing the delivery. The bill applies to medical doctors and osteopathic physicians and imposes a fine of \$10,000, imprisonment in a state penitentiary for not more than two years

or both. Further the bill provides for review by the State Board of Medical Licensure and Supervision for a defendant accused of an offense and such findings are admissible at the defendant's trial. *Signed by the Governor on April 15, 1998. Effective immediately.*

✓ **HB 2624**, "Therapeutic Pain Management," by Ray Vaughn of the House and Howard Hendrick of the Senate. The OSMA expressed concern about the introduced version of this bill. In a coalition with the Oklahoma Osteopathic Association and the Oklahoma State Bureau of Narcotics and Dangerous Drugs we were successful in deleting all references to any practitioners other than medical doctors and osteopathic physicians. Other than an intent clause, we convinced the proponents of the bill that pain management should be dealt with through the licensure board rules process rather than by statute. HB 2624 requires the State Board of Medical Licensure and Supervision and the Board of Osteopathic Examiners to issue policies, guidelines or rules that ensure that medical doctors and osteopathic physicians who are engaged in the appropriate treatment of pain are not subject to disciplinary action. The Boards shall consider policies and guidelines developed by national organizations with expertise in pain medicine or in a medical discipline for this purpose. The bill provides that if, in the judgment of the medical doctor or osteopathic physician, appropriate pain management warrants a high dosage of controlled dangerous drugs and the benefit of the relief expected outweighs the risk of the high dosage, the physician may administer such a dosage, even if its use may increase the risk of death, so long as it is not also furnished for the purpose of causing, or the purpose of assisting in causing, death for any reason and so long as it falls within the policies, guidelines and rules of the licensure boards. *Signed by the Governor. Effective date November 1, 1998.*

✓ **HB 2685**, by Abe Deutschendorf of the House and Jim Maddox of the Senate, amends the Nursing Practice Act granting authority to podiatric physicians to supervise certified registered nurse anesthetists. Under hospital regulations a podiatrist may not perform surgery on a patient unless a history and physical is taken by a medical doctor or osteopathic physician on staff. *Signed by the Governor. Effective date November 1, 1998.*

✓ **SB 1069**, "Physician Assistants' Prescribing," by Ben Robinson of the Senate and Bill Settle of the House, amends

the act by allowing physician assistants to prescribe and order drugs, including controlled dangerous medications in Schedules II through V, under the direction of a supervising physician (medical doctor or osteopathic physician). Prior to authorization to prescribe the Physician Assistant Drug Formulary must be approved by the State Board of Medical Licensure and Supervision after consultation with the State Board of Pharmacy. *Signed by the Governor. Effective date November 1, 1998.*

✓ **SB 1191**, "Licensure by Specialty," by Lewis Long of the Senate and Charles Gray of the House. SB 1191 required the State Board of Medical Licensure and Supervision and the State Board of Osteopathic Examiners to certify physicians' practices by specialty and mandated that a physician could not practice outside the specialty for which they had been certified. SB 1191 would have added to the licensure and regulatory responsibilities of the Boards additional duties of certification. Although not provided in the bill, a fee increase from licensees would have been necessary to cover the costs associated with the additional responsibilities. The OSMA strongly opposed this bill and after intensive lobbying from physicians Senator Long agreed to withdraw the bill.

✓ **SB 1243**, "Assisted Suicide Prevention Act," by Howard Hendrick of the Senate and Ray Vaughn of the House, prohibits a person from assisting another person to commit or attempt to commit suicide. The bill specifically defines licensed health care professionals as physician and surgeon, podiatrist, osteopathic physician and surgeon, physician assistant, nurse, dentist, or pharmacist and makes exceptions for appropriate pain management and withholding or withdrawing medically administered, life-sustaining procedures. Any person given standing by this act may maintain a cause of action against persons who violate or attempt to violate this act for compensatory and punitive damages. The appropriate licensing agency shall revoke or suspend the license of persons violating this act. *Signed by the Governor. Effective date November 1, 1998.*

✓ **SB 1364**, "State Board of Medical Licensure and Supervision," by Bernest Cain of the Senate and Fred Morgan of the House. SB 1364 amends current law by adding to the licensure act under ground for denial of a license: (1) use of false or fraudulent information by the applicant; (2) suspension or revocation of a license in another state unless the license has been

reinstated in that state; and, (3) refusal of licensure in another state other than for examination failure; and multiple examination failures. The act adds to the requirement for out of state applicants applying for an Oklahoma license that passing the National Boards Examination administered by the National Board of Medical Examiners shall be accepted. Further, in the section on unprofessional conduct the following language was added: (1) failure to maintain an office record for each patient which accurately reflects the evaluation, treatment, and medical necessity of treatment of the patient; or (2) failure to provide necessary on-going medical treatment when a doctor-patient relationship has been established, which relationship can be severed by either party providing a reasonable period of time is granted. *Signed by the Governor on May 28, 1998. Effective immediately.*

#### Telemedicine

✓ **HB2868, "The Oklahoma Telehealth Act,"** by Mike Ervin of the House and Ben Robinson of the Senate, establishes the state entity responsible for telemedicine and the Oklahoma Telemedicine Network as the State Department of Health. The State Department of Health is charged with implementing a working agreement with the Oklahoma State University Telemedicine Center to continue development of the telehealth system. The bill also moves the Division of Health Care Information to the Department of Health from the Oklahoma Health Care Authority. The Health Care Information Division is charged with collecting, maintaining and analyzing health care data from providers. The OSMA strongly supported this provision of HB 2868. *Signed by the Governor. Effective date July 1, 1998.*

✓ **SB 832,** by Ben Robinson of the Senate and Mike Ervin of the House, creates the "Telemedicine Advisory Council" that shall study barriers to the development of effective telemedicine services and make recommendations to public agencies and private entities for overcoming those barriers and advise the Governor and the Legislature regarding improvement in public policy related to telemedicine. The membership of the advisory Council shall include six (6) ex-officio members: the Administrator of the Health Care Authority, the Administrator of the State and Education Employees Group Insurance Board, the Commissioner of Health, the Director of the Department of Corrections, the Chancellor of Higher Education and the Director of the Department of Human

Services. Other members appointed by the Governor are as follows: an executive of a tertiary hospital, and executive of a regional hospital, three persons who shall each be executives of a not-for-profit rural hospital, clinic, or other not-for-profit entity presumed to be a user of services provided via telemedicine. The Speaker of the House and the President Pro Tempore of the Senate shall appoint a member of the Senate, a representative of the Hospital Association, two (2) representatives of medical associations, a member of the House of Representatives, and a representative of a rural development body. HB 2868 allows for five (5) additional appointees if the Advisory Council so desires. SB 832 also clarifies that partnerships with the Department of Corrections shall not be limited to the university Hospitals Trust. *Signed by the Governor on June 11, 1998. Effective immediately.*

✓ **SB 963,** by Kelly Haney of the Senate and James Hamilton of the House, appropriates \$189,000 to OneNet to fund telephone line charges for rural hospitals using telemedicine associated with the Oklahoma Telemedicine Network. This one time appropriation will pay for charges from November, 1997 to July, 1998. *Signed by the Governor March 26, 1998. Effective immediately.*

✓ **SB 965,** by Kelly Haney of the Senate and James Hamilton of the House, appropriated \$342,000 to the Office of State Finance for telemedicine line charges. *Signed by the Governor March 26, 1998. Effective immediately.*

#### Certificate of Need, Ambulatory Surgery Center Bills Opposed by OSMA

✓ **HB 1665,** a companion bill, by Trish Weedn of the Senate and Randall Erwin of the House, imposed a **moratorium** on the establishment, construction, application and licensing process of all new ASCs in counties of less than 65,000 until July 21, 1999. The moratorium does not apply to ASCs that have a license or pending license on April 1, 1998. The bill was **amended in Joint Conference Committee to strike provisions related to ambulatory surgery centers.** HB 1665 reverted to the introduced version which amends current law by adding health care professionals, providers or other entities providing health care services to the list of those prohibited from soliciting patients (ambulance chasing). The bill does not apply to legitimate advertising. *Signed by the Governor. Effective date November 1, 1998.*

✓ **HB 2452,** by Bill Paulk of the House and Ben Robinson of the Senate, provided that in the future new hospitals and ambulatory surgery centers would be required to provide written verification annually to the State Health Commissioner showing that at least 45 percent of gross revenues come from Medicare, Medicaid or both. HB 2452 further stated that the commission may suspend or revoke the license of any hospital or ambulatory surgery center that did not meet the minimum percent requirements or did not file the annual verification. The "45 percent rule" would not apply to those hospitals or surgery centers where a letter of intent to construct is submitted to the health commission prior to November 1, 1998. Passed the House and did not receive a hearing in the Senate Business and Labor Committee.

✓ **HB 2965** by Randall Erwin of the House and Trish Weedn of the Senate, provided that no new license shall be issued to an ambulatory surgery center (ASC) and no ASC shall be established within 10 miles from a municipality which has a municipal or county hospital with any outstanding bonded indebtedness located in a country with a population of less than 65,000 persons. The provision so would not apply if an ASC has a license issued by the Commissioner of Health or has a license pending on April 1, 1998. The conference Committee Report amended the bill to require a county or municipal option vote of the people after 10 percent of the signatures are collected from the registered voters casting votes in the last general election. *Vetoed by the Governor on May 27, 1998.*

✓ **SB 893,** by Howard Hendrick of the Senate and Ray Vaughn of the house, required ambulatory surgery centers to render 24 hour emergency care and 45 percent of gross revenues come from Medicare, Medicaid or both. *After passing the Senate the bill was withdrawn by the author.*

✓ **SB 1225,** by Trish Weedn of the Senate and Charles Gray of the House, established requirements that no ambulatory surgery center shall be established in a county with a population of less than 100,000 in which there is a municipal or county hospital. The legislation did not affect renewal licenses for ambulatory surgery centers licensed prior to the effective date of the bill. *Passed the Senate and did not receive a hearing in the House Public Health Committee.*

### Senate to Study Rural Ambulatory Surgery Centers

On May 29, the last day of the legislative session the Senate passed Senate Resolution 89, by Trish Weedn of the Senate, creating a Task Force on Rural Health Care to study and assess all relevant data relating to the availability and delivery of health care services to citizens in the rural areas of this state. The Task Force is created until February 15, 1999 and will be made up of ten (10) members of the State Senate appointed by the President Pro Tempore. The focus of the Task Force will be to study the impact of the establishment and operation of ambulatory surgery centers and other specialty health care facilities. A simple resolution is passed by the House of the legislature and is not signed by the Governor. It does not have the force and effect of law but is used to express the will or opinion of the initiating House. The OSMA will work with the Task Force by providing information and testimony.

### Insurance

✓ **HB 2313**, "Hospital-Dental Anesthesia Coverage," by Joe Eddins of the House and Bernest Cain of the Senate, provides that any health benefit plan that provides hospitalization benefits shall provide coverage for anesthesia expenses, hospital and ambulatory surgery center expenses, and physician expenses associated with any medically necessary dental procedure when the insured is severely disabled or a minor child eight years of age or under. Signed by the Governor. *Effective date November 1, 1998.*

✓ **HB 3171**, "Payment of Health Insurance Claims," by Hopper Smith of the House and Lewis Long of the Senate, requires the Oklahoma State and Education Employees Group Insurance Plan, health maintenance organizations and every medical group plan which contracts with an HMO to reimburse all clean claims of an enrollee, and assignee of an enrollee, or a health care provider within sixty (60) days after receipt of such claim. If a claim should have defects the party shall be notified in writing within forty-five (45) days after the receipt of the claim. Upon receipt of additional information or corrections which caused delay in processing, the claim shall be paid within ninety (90) days. An overdue payment shall bear simple interest at the rate of ten (10) percent per year. Signed by the Governor. *Effective date July 1, 1998.*

✓ **SB 873**, "Prostate Coverage," by Sam Helton of the Senate and Jim Glover of the House, requires the Oklahoma State and

Education Employees Group Insurance Board (OSEEGIB) to pay for medical services and treatment rendered by an out-of-state hospital if the insured was referred by a physician and the out-of-state hospital is the closest hospital in proximity to the residence of the insured. SB 9873 also requires all health plans offered by OSEEGIB to provide coverage for side effects that are commonly associated with radical retropubic prostatectomy surgery, including, but not limited to impotence and incontinence, and for other prostate related conditions. Signed by the Governor. *Effective date July 1, 1998.*

✓ **SB 1198**, by Angela Monson of the Senate and Jari Askins of the House, prohibited OSEEGIB from contracting exclusively with an out-of-state provider(s) for specialized services and shall contract with an in-state provider(s) as a network provider for specialized services. The bill also expanded duties of the Joint Liaison Committee on OSEEGIB to require a **study of privatizing the state plan** and requires the Employee Benefits Council to develop addition PPO options for enrollees. The bill removed excessive bid pricing criteria, and required HMOs to submit information regarding utilization data and loss ratios for FY-97 and FY-98 and each year thereafter. The OSMA supported the privatization study. Vetoed by the Governor on June 11, 1998.

✓ **SB 1210**, "Mandated Health Benefits Report," by Ben Robinson of the Senate and Gary Bastin of the House, directs the State Senate and House of Representatives fiscal staffs to submit a report on the fiscal impact of any mandated health benefit for the Governor, the President Pro Tempore of the Senate and the Speaker of the House prior to the adoption of any mandated health benefit by the legislature and executive branch. Signed by the Governor. *Effective date July 1, 1998.*

### Medicaid Expansion

✓ **HB 2701**, "State Children's Health Insurance Program," (SCHIP) by Don Ross of the House and Angela Monson of the Senate, instructed the Oklahoma Health Care Authority to prepare a state plan including options for a **public-private partnership** for the implementation of the SCHIP program for children up to eighteen (18) in families with incomes between 185 percent and 200 percent of the federal poverty level. The Governor vetoed HB 2701 because the legislation regulates recommendation increasing the income level at which health insurance will be extended and the 1997 program has not been fully

implemented. The OSMA supported a public-private partnership. *Vetoed by the Governor on June 10, 1998.*

✓ **HB 3292**, by Billy Mitchell of the House and Angela Monson of the Senate, directed the Oklahoma Health Care Authority (OHCA) to expand Medicaid coverage to children eighteen (18) years of age or younger whose family income does not exceed 185 percent of the federal poverty level. In the 1997 session SB 639 was enacted which called for a phase in of coverage for children fourteen (14) years of age or younger. HB 3292 would have accelerated the phase in period. The bill was vetoed by the Governor. In his veto messages he states, "this legislation requires increasing the income level at which health insurance will be extended. Last year the Legislature expanded Medicaid to include adolescent children and pregnant women. While that program has not been fully implemented, I would encourage the Health Care Authority to accelerate coverage of sixteen (16) and seventeen (17) year olds. However, expansion of coverage outside the mandates of SB 639 is unacceptable until the current legislation is fully implemented." Funds to expand coverage through age seventeen were appropriated in SB 923. *Vetoed by the Governor on June 11, 1998.*

### Appropriations

✓ **SB 923**, by Kelly Haney of the Senate and Jim Hamilton of the House, appropriated \$324,346,050 to the **Oklahoma Health Care Authority** for FY-99. This is a 3.4 percent increase from FY-98 with an increase of \$10,695,903. **The State Department of Health** received \$63,968,510 for FY-99 which is a 15.5 percent increase from FY-98. The dollar amount increase is \$8,598,053. **The Department of Mental Health and Substance Abuse** received \$127,063,452 for FY-99 which is a 3.9 percent increase with a dollar amount increase of \$4,742,042. The University Hospitals Authority received \$26,578,556 for FY-99 reflecting no increase from FY-98. Signed by the Governor. *Effective date September 1, 1998.*

✓ **HB 3039**, by James Hamilton of the House and Kelly Haney of the Senate, appropriated an increase of \$9,498 to the **Physician Manpower Training Commission** for employee pay and benefits. The total appropriation for FY-99 is \$5,499,743 which is a .2 percent increase over FY-98.

## OSMA'S 1999 Legislative Agenda

The Council developed the legislative goals again this year that will reflect the OSMA's policy and priorities. These legislative goals, along with the Council's 1999 Legislative Agenda, were presented to the OSMA's Board of Trustees for approval on October 18, 1998. Both the agenda and goals were unanimously approved.

## OSMA's 1999 Legislative Goals

### Read as Follows:

#### Goal 1: Insurance Regulation Issues

Promote legislation that will protect and enhance patient access to appropriate quality care provided by medical and osteopathic physicians without the negative interference of insurance companies and regulatory entities.

**Objective:** Prevent any delay or denial of medical necessary patient diagnostic and treatment options while protecting the autonomy of the physician in medical decision making.

#### For Example:

1. Advocate legislation that will implement effective physician and patient friendly approaches to the implementation of managed care.
2. Seek methods for appropriately regulating the quality of care delivered by Managed Care Organizations (MCOs).
3. Promote legislative and regulatory protection for fair, reasonable and appropriate medical fees.
4. Monitor the implementation of Sooner Care and address problems arising therefrom.
5. Support legislation to prohibit insurance companies and pharmacists from making substitutions for drugs with a narrow therapeutic index.
6. Support legislation to prohibit insurance companies from using limited formularies.
7. Support Mental Health Parity.

#### Goal 2: General Health Issues

Promote legislation that will enhance the health and well-being of the public.

**Objective:** Encourage the prevention of health problems, and promote healthy lifestyles, early intervention and appropriate treatment.

#### For Example:

1. Support public policy and legislation curbing tobacco use.
  1. Allow local communities to pass their own regulations on tobacco use and sales tougher than current state law.
  2. Promote legislation providing for penalties for owners of any company selling tobacco products to minors.
  3. Advocate legislation which appropriately restricts tobacco advertising, especially advertising targeted towards young people.
  4. Promote legislation to require strict enforcement of penalties.
2. Support legislation aimed at the control or prevention of violence, especially family violence, in Oklahoma.
3. Seek adequate funding for the Poison Control Center.
4. Seek new funding options that will help establish a statewide trauma system, including a Level I Trauma Center as passed by the OSMA House of Delegates.
5. Support legislation and regulations which would prohibit the sale of nonhuman primates to private citizens as passed by the OSMA House of Delegates.
6. Support public policy that would improve access to medical and public health services for all Oklahomans.
7. Continue active support of a strong medical education system to benefit future Oklahomans.
8. Oppose unreasonable restrictions on Ambulatory Surgery Centers (ASCs).
9. Support Legislation that clarifies the Do Not Resuscitate Act (DNR).

#### Goal 3: Scope of Practice

To provide the maximum protection of patients' health by assuring the best quality of care.

**Objective:** Preserve and protect the autonomy of all medical and osteopathic physicians in providing the highest quality of patient care and protect the public from health care providers who are less qualified.

#### For example:

1. Resist any attempt by optometrists to increase their scope of practice.
2. Resist any attempts for prescribing privileges or any other increase in the scope of practice by pharmacists, optometrists, nurses, chiropractors, and others.

#### Goal 4: Tort Reform

Promote legislation that will provide fairness and efficiency at all levels (District, Appellate and Supreme Court) of the civil justice system, especially in the professional and product liability arena.

**Objectives:** Preclude attempts to put the defendant physician(s) at a direct or indirect disadvantage in the medical malpractice lawsuit. To obviate professional liability tort laws that coerce the physician into pretrial settlement.

#### For Example:

1. Support legislation to effect confidentiality of peer review mechanisms.

#### Goal 5: Workers Compensation

Review and monitor workers compensation legislation to determine the impact on physicians who render medical services in the workers compensation environment.

**Objective:** Prevent any change of the workers compensation laws that adversely affect the way medical or osteopathic physicians deliver care to an injured worker and support such changes that improve such care.

#### Legislative Subcommittees

The Chairman of the Legislative Council appointed four subcommittees to study legislation and report recommended positions to the full Council. These subcommittees include:

Insurance and Regulation, Steve Crawford, MD, Chair  
General Health Issues, Susan Harmon, MD, Chair  
Scope of Practice, John Leatherman, MD, Chair  
Other Health Issues, Sara DePersio, MD Chair

#### OSMA's 1999 Legislative Agenda (Priority Bills) Includes the Following:

Legislation initiated by the OSMA passed from the house of origin and is being considered by the opposite house:

✓ HB 1443, "Oklahoma Health Care Quality Improvement Act," (Peer Review) by Betty Boyd of the House and Mike

Morgan of the Senate, passed the House of Representatives with 100 members voting for the bill. Representatives of the Coalition for Quality Patient Care and the Oklahoma Trial Lawyers Association continue to negotiate with the goal of reaching agreement on the contents of this legislation. Currently the Coalition for Quality Patient Care includes the OSMA, the Oklahoma Hospital Association, the Oklahoma Osteopathic Association, and the Oklahoma Pharmacists Association. Passed the Senate Judiciary Committee; on General Order in the Senate. At this time this bill will go to Joint Conference Committee.

✓ **HB 1368, "Genetic Research Study Nondisclosure Act,"** by Betty Boyd of the House and Ben Brown of the Senate, amends the Genetic Non-Discrimination Act passed in the 1998 session by outlining procedures for the handling of genetic research material based on the informed consent of the patient. Passed the Senate Committee on Human Resources; on General Order in the Senate.

✓ **HB 1381,** by Russ Roach of the House and Brad Henry of the Senate, amends the "Oklahoma Do-Not-Resuscitate Act," by inserting a hierarchy of persons, including family members, into the decision making process of persons eligible to inform the attending physician that the incapacitated person would not have consented to the administration of CPR and that nothing in the act shall require any physician or health care provider to take any action contrary to reasonable medical standards. Passed the Senate Judiciary Committee; on General Order in the Senate.

✓ **SB 290, "Trauma Care Assistance Revolving Fund,"** by Ben Brown of the Senate and Bill Paulk of the House, creates a revolving fund in the State Treasury administered by the Department of Health which shall not be subject to fiscal year limitations and may be expended as follows: 90 percent shall be used to reimburse recognized trauma facilities for uncompensated trauma care; and 10 percent shall be used by the Department in the furtherance of its powers and duties set forth in the Emergency Medical Services and Care Systems Act. Funds for the revolving fund shall be obtained by increasing certain fines paid by persons convicted of traffic violations and by minimal increases in driver's license, inspection and registration fees. Assigned to the House Appropriations Committee.

#### **Bills initiated or supported by the OSMA and the Oklahoma Hospital Association:**

✓ **HB 1486, "SoonerCare Task Force,"** by Bill Paulk of the House and Bernest Cain of the Senate amends the act passed in 1998 by extending the task force until February 15, 2000. This was initiated at the request of OSMA members serving on the task force. The task force met over the interim to study and make recommendations to elected officials on patient education regarding access, utilization of emergency medical services, eligibility, physician assignments, access to services, equitable reimbursement rates for emergency room screening; and, address patient and provider educational endeavors necessary for expansion of SoonerCare to the aged, blind and disabled and Title XXI populations. Passed the Senate Committee on Human Resources; on General Order in the Senate.

✓ **HB 1158, "The Emergency Medical Services and Care Systems Act,"** by Kenneth Corn of the House and Larry Dickerson of the Senate, is a vehicle for legislation designed to address trauma care in rural communities. Currently the bill amends the Oklahoma Emergency Response Systems Development Act to include the development of a classification system for all hospitals that treat emergency patients by: (a) identifying stabilizing and definitive emergency services provided by each hospital; and, (b) requiring each hospital to notify the regional emergency medical services system control when treatment services are at maximum capacity and emergency patients should be diverted to another hospital. Additionally the bill provides for the development and monitoring of a statewide emergency medical services and trauma analysis system designed to: (a) identify emergency patients and severely injured trauma patients; (b) identify the total amount of uncompensated emergency care provided each fiscal year by each hospital and ambulance service; and, (c) monitor emergency patient care provided by emergency medical services and hospitals. Assigned to the Senate Sub Committee on Appropriations - Health and Social Services.

✓ **SB 439, OSEEGIB,** by Angela Monson of the Senate and Larry Roberts of the House, if enacted is new law requiring the Oklahoma State and Education Employees Group Insurance Board (OSEEGIB) to schedule a hearing thirty days prior to adopting any change of reim-

bursement rates and methodology after notifying contracted health care providers at least fifteen days prior to the hearing. Notice to providers shall include proposed changes to rates and methodology. The provision requiring OSEEGIB to attach reimbursement fee schedules to all of the Board's provider contracts was deleted in committee but OSMA will attempt to reinstate this provision. Assigned to the House Committee on Rules.

✓ **HB 1588,** a bill related to OSEEGIB, by John Sellers of the House and Angela Monson of the Senate, was amended on the House floor by Representative Wayne Pettigrew to **prohibit rate changes until a report has been issued by the Task Force on OSEEGIB** that was created by HB 2290 enacted during the 1998 legislative session. At this time the Task Force has not been appointed but we are working with Senator Monson to accomplish this. Assigned to the Senate Sub Committee on Appropriations - Retirement and Group Health.

#### **Bills strongly supported by the OSMA:**

✓ **SB 2, "Mental Health Parity,"** by Angela Monson of the Senate and Loyd Benson of the House, mandates insurance coverage for schizophrenia, bipolar disorder, major depression, panic disorder, obsessive-compulsive and schizoaffective disorder. Premium cost increases shall not exceed three percent. Businesses with fifty or fewer employees are exempt from the provisions of the bill. At this time, the bill provides for the mandate; however, there is a proposal by the State Chamber of Commerce and Industry and the insurance industry that provides a 50 percent tax credit to businesses who offer mental health coverage to employees. This proposal has the potential of covering more Oklahomans because businesses currently exempt from mandates due to federal law and those with 50 or fewer employees could participate. The proposal provides for the tax credit to employers who offer mental health coverage for one year. In year two the mandate will become effective and the tax credit will apply.

In year three only the mandate applies. The OSMA is supportive of this proposal. Assigned to the House Committee on Insurance.

✓ **HB 1826, "Oklahoma Managed Care External Review Act,"** by Betty Boyd of the House and Ted Fisher of the Senate. Provides for an external review process of a decision by a health benefit plan to deny reimbursement for, or coverage of, a medical treatment or service that is otherwise

a covered benefit by an independent review organization upon the request of the insured person or their designee. The act is administered by the Department of Health and the Commissioner appoints the independent review officers. Assigned to the Senate Committee on Human Resources.

**Bills strongly opposed by the OSMA that are dead for this session:**

**HB 1133, "The Oklahoma Homeopathic Physicians and Surgeons Licensure Act;"**

**HB 1264**, requiring that a **prescription label include the symptom, disease or condition** for which the prescription is to be used; **SB 360, "The Oklahoma Naturopathic Licensing Act;"** **HB 1358** and **SB 343, "Prescriptive Authority for Chiropractors;"** and **HB 1605, "Insurance Payments and Mental Health Professionals"** prohibiting any discrimination in the payment schedule or payment provisions in health insurance policy in the manner of payment or reimbursement between services or procedures when performed by a licensed mental health professional and the same services or procedures when performed by any of practitioner of the healing arts.

✓ **HB 1355, "Physician Profiling,"** by Charles Gray of the House, requires any physician, including medical doctors, osteopathic physicians, podiatrists, chiropractors, optometrists and dentists, who applies for a new or renewal license to provide the State Board of Medical Licensure and the State Department of Health with extensive information including making quarterly reports about the number and percentage of certain patient procedures. Much of this information is currently available either through the licensure boards or reported annually to the Department of Health by hospitals. The author declined to advance the bill.

**Other Legislation of Interest:**

✓ **HB 1188, "Ambulatory Surgery Centers,"** by Mike Thornbrugh of the House and Trish Weedn of the Senate, is legislation initiated by the Oklahoma Hospital Association requiring that hospitals, specialty hospitals and ambulatory surgery centers who have not received approval to construct a new facility shall be required to furnish annually to the Department of Health verification that at least 35 percent of its annual gross revenues are from Medicare, Medicaid, uncompensated care, and/or corporate tax contributions. The bill was amended in the House Public Health Committee to lower the percentage to 25 percent. The bill was amended on the House

floor by Representative Bill Paulk (D), Oklahoma City, as follows, "In order to ensure equal justice and improve the quality of health care for the citizens of this state, the same principles of confidentiality or nonconfidentiality that apply to peer review activities regarding lawyers in this state shall apply to all peer review activities regarding doctors and hospitals in this state." Representative Paulk is a co-author of HB 1443, Peer Review, and the OSMA appreciates his efforts. The OSMA is currently in negotiations with the Oklahoma Hospital Association about the provisions of this bill related to ambulatory surgery centers. Assigned to the Senate Committee on Human Resources.

✓ **HB 1189, "Medical Practice Act Amendments,"** by Mike Thornbrugh of the House and Bernest Cain of the Senate, is a request bill from the Board of Medical Licensure and Supervision which provides for a licensee to surrender a license in lieu of prosecution after certain conditions are met and strengthens the Board's ability to promulgate rules governing the conduct of physicians who supervise and control unlicensed trained assistants. The OSMA supports the bill. Passed the Senate Committee on Business and Labor; on General Order in the Senate.

✓ **HB 1767, "Telemedicine,"** by Mike Ervin of the House and Ben Robinson of the Senate, is a request bill by the Task Force on Telemedicine. Although the provisions of the bill are not finalized the bill currently provides for the State Department of Health to award one or more competitive grants to public hospitals or health care facilities for programs which deliver medical and other health care services through Telemedicine, contingent upon appropriated funds. All grants shall be matched with funds from the grant recipient or in-kind contributions. Specific terms for the goal of the grant program are outlined in the bill and the State Board of Health shall promulgate rules for the implementation of the program. Assigned to the Senate Committee on Human Resources.

✓ **SB 222, "Unintended Pregnancy and Abortion Reduction Act,"** by Ben Brown of the Senate and Russ Roach of the House, is new law requiring insurance coverage for any prescribed drug or device approved by the FDA for use as a contraceptive. The bill passed the Senate Committee on Human Resources and was not advanced by the author so this bill is dead.

**Insurance Bills of Interest:**

✓ **HB 1318, "PPO — Health Care Freedom of Choice Act,"** by Fred Stanley of the House and Brad Henry of the Senate, amends the Health Care Freedom of Choice Act, originally enacted for indemnity insurance, to add ambulatory surgery centers to the act and define preferred provider organizations as a network of practitioners, hospitals, and ambulatory surgical centers, which have entered into a contract with an insurer to provide health care services under the terms and conditions established in the contract. Proposed amendments to the act further state that nothing in the act shall prohibit an insurer from establishing a PPO, a standard contract and specifying the terms and conditions, including provider qualifications, levels or methods of payment that must be met by a practitioner selected by the insurer as a participating provider. **The legislation was initiated by the Independent Medical Providers Action Coalition (IMPAC) and the OSMA supports the above provisions.** The bill was amended in the House Public Health Committee as follows, "A preferred provider organization, in executing a contract, shall not by the terms and conditions of the contract discriminate in its network of practitioners with respect to participation and reimbursement as it relates to any provider who is acting within the scope of the provider's license under the law solely on the basis of such license." **The OSMA opposes this provision** because it is in direct conflict with other provisions of the bill and would require the PPO to reimburse **any network practitioner** (medical doctor, osteopathic physician, optometrist, chiropractor, podiatrist or dentist) **the same solely on the basis of the practitioner's scope of practice.** Scope of practice is determined by the Legislature and individual licensure boards. Scope of practice, because it is legislated, is not the same as qualifications and training to perform certain procedures. This provision could allow a chiropractor, optometrist and podiatrist to make the claim that under their scope of practice they are allowed to perform the same procedure as a medical doctor or osteopathic physician and therefore be reimbursed the same. The bill passed the House of Representatives on March 3. After much debate the title of the bill was stricken which means if the Senate passes the bill the House of Representatives will have another opportunity to take action on the bill before final passage. A bill cannot become law unless it has a title. Assigned to the Senate Committee on Judiciary.

✓ **HB 1384, "Oklahoma Women's and Children's Accessibility Act,"** by Russ Roach of the House and Ben Brown of the

Senate, requires that health plans issued or renewed after January 1, 2000, shall allow obstetricians and gynecologists to be designated as primary care practitioners thereby intending that patients have direct access to these services should they so choose. Assigned to the Senate Committee on Human Resources.

✓ **HB 1681** by Mark Seikel of the House is an act related to managed care initiated by the Oklahoma Nurses Association. Currently the bill contains provisions that are not well defined or much too broad such as the term "provider." Provider is not defined in the bill. Oklahoma law does not define provider and legislation of this type generally uses the term physician with certain definition. The bill provides for: (1) timely referrals for enrollees to go out of the plan's network for specialty care with no extra cost to the enrollee if there is not an in network specialist; (2) allowing enrollees with chronic, disabling or life threatening conditions to use specialists as the primary care provider; (3) the provision requiring plans to have a process for allowing enrollees with life-threatening or serious illness to participate in clinical trials and covering the routine patient costs associated with those trials was deleted from the bill on the House floor; (4) require plans to have a process for enrollees to access medications within 24 hours that are not on a drug formulary when indicated by the prescribing practitioner; and, (5) require health institutions to make public specified information on staffing levels, staffing mix and patient outcomes such as the number of registered nurses providing direct patient care, numbers of unlicensed persons utilized to provide direct patient care, average number of patients per registered nurse providing direct patient care, patient mortality rates, incidence of adverse patient care incidents and the methods used for determining and adjusting staffing levels and patient care needs. On Thursday, March 18, representatives from the OSMA, the Oklahoma Hospital Association (OHA) and the insurance industry met with representatives from the Oklahoma Nurses Association (ONA) at the request of Senator Monson to discuss the bill. After reviewing objections to the bill in its current form the ONA and Senator Monson agreed to restructure the bill to deal with continuity of care issues. At this time the OSMA has withdrawn objections to advancing the bill with the agreement that we will have input into the bill in its final form. Assigned to the Senate Committee on Business and Labor.

#### **SoonerCare and Medicaid**

Currently there are several bills dealing with Medicaid, SoonerCare or the Health Care Authority. The bills are either shell bills (no substantive language) or appropriations bills that will move through the process to joint conference committee to be seriously considered by the legislature in April and May.

✓ **SB 789**, by Bernest Cain of the Senate and Debbie Blackburn of the House, is a request bill from the Attorney General that amends the Oklahoma Medicaid Healthcare Options Act by requiring that a **participating provider shall also provide a copy of any bill for services under the state Medicaid program to the Medicaid client or such client's guardian, if any.** Objections to this provision have been raised by the OSMA, The Oklahoma Hospital Association and the Health Care Authority. The bill's authors are working with us to address our concerns. On General Order in the House.

✓ **SB 625, amendments to the Medicaid Drug Utilization Review Board (DUR)**, by Angela Monson of the Senate and Fred Stanley of the House amends the DUR Board powers and duties from implementation of retrospective and prospective drug utilization programs to making the Board responsible for the development of these programs. SB 625 is a request bill by the Pharmaceutical Manufacturers Association (PhRMA) and is opposed by the Oklahoma Pharmacists Association (OPhA) and the OSMA. The bill, in its current form, has the potential of increasing costs and imposing restrictions on the DUR Board. Currently the OSMA and the OPhA are working with PhARMA to address our concerns. Assigned to the House Committee on Public Health.

#### **Tobacco**

✓ **HB 1002**, by Jari Askins of the House and Ben Brown of the Senate, appears to be the vehicle that will create the Tobacco Settlement Special Cash Fund specifying how the funds should be disbursed and require expenditure of funds subject to legislative approval. Currently there are proposals to use the funds for a variety of programs including a bail out of the Oklahoma Teachers Retirement System. The public health advocates including the OSMA want the funds to be used for public health purposes including tobacco cessation programs, education and treatment of tobacco related illnesses. Assigned to the Senate Committee on Appropriations.

✓ **HB 1601, "Tobacco Companies and Escrow Accounts,"** by Ray Vaughn of the House, requires cigarette companies that have not entered into the "Master Settlement Agreement" to contribute to a special reserve fund to pay for potential future liabilities. The intent of the bill is to require cigarette companies that refuse to sign the settlement agreement to establish a reserve fund "to guarantee a source of compensation and to prevent such manufacturers from deriving large, short-term profits and then becoming judgement proof before liability may arise." For deliberately withholding funds, a manufacturer could be fined 15 percent of the amount withheld, up to triple the original amount that was supposed to have been deposited into the escrow account. Assigned to the Senate Committee on Appropriations.

✓ **SB 452, "Ban Sale of Untaxed Tobacco Products,"** by Ted Fisher of the Senate and Mike Tyler of the House, passed the House by a vote of 98-1. The bill bans the sale in Oklahoma of untaxed tobacco products that ostensibly were intended for export and imposes fines from \$100 to \$5,000 for violations by retailers and fines from \$5,000 to \$20,000 for wholesalers or warehousemen who violate the bills provisions. SB 452 will go back to the Senate for approval of House amendments and if approved go to the Governor for action.

#### **Medical Malpractice**

✓ **SB 751**, by Brad Henry of the Senate and Opio Toure of the House, is a bill requested by the Oklahoma Bar Association. The bill was amended at the request of the Oklahoma Trial Lawyers Association to include a provision that would limit defense attorneys in medical malpractice cases to obtain only "relevant" medical records of the plaintiff or talking with treating physicians other than through formal deposition taking procedures. The OSMA is working with the Oklahoma Hospital Association and the Oklahoma Osteopathic Association and defense attorneys to delete this provision from the bill. Additionally the OSMA and OHA have contacted other groups representing health care providers to alert them to this provision. At this time the amendment affects all health care providers. Passed the House Judiciary Committee; on General Order in the House.

#### **Medicine Day**

Wednesday, February 3, 1999, was Medicine Day at the Capitol. The OSMA/OSMAA sponsored this event and it was a tremendous success. About 150

physicians and their spouses attended the event. Medicine Day gave the physicians a chance to visit with their legislators about health care issues. Governor Frank Keating, Speaker of the House Loyd Benson, House Minority Floor Leader, Fred Morgan, and Senator Bernest Cain, were the guest speakers for the event.

### Doctor of the Day Program

The Doctor of the Day program continues to provide physicians an opportunity for an up close look at politics in action and also adds to OSMA's presence at the Capitol. The legislative staff provides current information to each Doctor of the Day so they can be involved in the lobbying effort. This year the OSMA provided a pager for the Doctor of the Day, so that if the doctor is needed he/she can be reached. The increased physician/legislator contact has proven to be beneficial to our legislative effort, especially this year in the case of peer review.

### Legislative Communications and Grassroots

Legislative updates are provided on a regular basis in the Week in Review and in the OSMA newsletter and a full overview of each session is provided in a Legislative Summary. Blast faxes are sent out periodically when OSMA members need to be notified to take action on legislation immediately. OSMA has initiated an intensive grassroots campaign to identify key-contact physicians in all legislative districts. The OSMA physician database was recently expanded by adding data fields to identify the state and federal legislative districts for each OSMA member. Legislator information has been included within the database to allow for easy identification of Legislators on important Senate and House committees. The development of this grassroots identification system will be an ongoing effort by OSMA staff.

### Conclusions

The last Council on State Legislation meeting is scheduled for April 13, 1999. An update on the status of legislation will be provided at the Annual Meeting.

Respectfully submitted,

Edward N. Brandt, Jr., MD, Chairman  
John Aldridge, MD  
Richard Allgood, MD  
Richard Baltaro, MD  
Jack Beller, MD  
Richard Boatman, MD  
Jenny Boyer, MD  
Jonathan Brewer, MD  
Michael Butner, MD

Susan Chambers, MD  
William Coleman, MD  
Hugh Conner, Jr., MD  
Diane Cooke, Alliance President  
Steve A. Crawford, MD  
Sara DePersio, MD  
S.A. Dean Drooby, MD  
Scott Dunitz, MD  
Doris Edge, Alliance  
Jay Gregory, MD  
Susan Harmon, MD  
C. Wallace Hooser, MD  
Carol Blackwell Imes, MD  
Barbara Jett, Alliance  
David Kendrick, Medical Student  
John Leatherman, MD  
Robert Mahaffey, MD  
Amy Matzell, Medical Student  
John Nettles, MD  
Michael Schwartz, MD  
Jeffrey Shaver, MD  
Roger Sheldon, MD  
Richard V. Smith, MD  
Gary Strebel, MD  
Sherry Strebel  
Lanny Trotter, MD  
Kenneth Vermette, MD  
Joan Walker, MD  
Tisha Dowe Westmoreland, MD  
Boyd O. Whitlock, MD

## ■ REPORT OF THE COUNCIL ON MEMBER SERVICES

FILED FOR INFORMATION

Reference Committee III (A-99)

Subject: Annual Report

Presented by: William Bernhardt, MD,  
Chair

Referred to: Reference Committee III

### Introduction

The various programs of the Member Services Council are designed to encourage participation and membership in the Oklahoma State Medical Association. The products and services offered should provide quality and value to the association members and when possible, provide a source of non-dues revenue to the Association at no expense or detriment to the membership. Various endorsements also provide advertisement in our *Journal*, the Directory of Physicians, and exhibit fees and sponsorships at the OSMA Annual Meeting.

### Financial Report

The Member Service Corporation produced a net profit in non-dues revenue of \$25,490.57 during 1998. To assist with OSMA operating funds, \$20,000 will be moved to the 1997 OSMA accounts. The Member Services Corporation accounts

will be left with a balance of \$5490.57 after the transfer of funds is made.

### Procedures and Guidelines/Criteria for Corporate Relationships and/or Endorsement of Preferred Vendors

Due to the recent activities at the AMA regarding its corporate relationships and endorsements, this Council felt it was appropriate for a re-evaluation of how OSMA has been dealing with the vendors handling our various member services. Your Council on Member Services has been prepared a formal set of "Procedures and Guidelines/Criteria for Corporate Relationships and/or Endorsement of Preferred Vendors" which are currently under review by OSMA legal counsel Hartzog, Conger & Cason. These guidelines will eventually be presented to the Board of Trustees for approval and implementation. Once these guidelines/criteria are approved, this Council will then approach all existing preferred vendors and advise them of any changes which may need to be addressed in the existing contract arrangements.

### Review of Activities

Your Council on Member Services met in February and September of 1998. The Council met in February of 1999 and has set a goal to meet at least five times a year in the future. The following is a brief description of the various activities of the Council for that period of time. Also, attached to this report is a breakdown of the activities of the various "preferred vendors" during 1998-1999. For further information regarding any of the Preferred Vendor Programs, you may contact Michele Smith of the OSMA staff.

### Survey of OSMA Members

A survey of Oklahoma State Medical Association membership was conducted in November/December of 1998. Survey results are detailed in the Long Range Planning and Development report.

### New Business

#### Oklahoma Centralized Verification Organization, LLC (OCVO)

As of Jan. 1, 1999, OSMA was the official owner of OCVO. The transfer of ownership from Tulsa County Medical Society was a result of OCVO's expansion into a statewide business over the past few years. Credentialing is an integral part of the peer review system, and the acquisition of OCVO gives the OSMA a proactive credentialing company to work hand in hand with healthcare organizations in ensuring quality medical care for Oklahomans.

### Survey of Vendors/Services

The Council on Member Services has researched the following vendors to ensure they are reputable and competitively priced. Many of the Preferred Vendors offer essential services that are needed by OSMA members. These services also provide revenue for the OSMA.

| Vendor   | Service Provided  | Non-Dues Revenue<br>"Accrued" in 1998  | Contract<br>Began         | Contract<br>Ends            | Participation by OSMA<br>Members during 1997   |
|--|---|--|---------------------------|-----------------------------|--|
| AutaFlex   | Automobile Leasing/Purchase                             | \$500  | 01/1996                   | 12/2001                     | 5 new Leases/Purchases   |
| C.L. Frates<br>and Company                           | Insurance   | \$4,500  | 01/1993                   | 12/2003                     | New Policies<br>in 1998<br>Policies<br>to Date   |
|  |   |  | Plan                      | Business Overhead           | 7 114  |
|  |   |  |                           | Disability Income           | 11 202   |
|  |   |  |                           | Group Term Life             | 18 210   |
|  |   |  |                           | Hospital Indemnity          | 0 47   |
|  |   |  |                           | Accidental Death            | 0 72   |
|  |   |  |                           | High Limit Term Life        | 8 52   |
| Canamikes<br>Reports, Inc                            | Publications/Medical                                    | \$157.00   | N/A                       | Open-Ended                  |  |
| Destinations -<br>Quest Program                      | Travel Discounts on<br>Car Rentals, Restaurants, Hotels | \$208.00   | 03/94                     | Open-Ended                  | OSMA Quest Members 122   |
| Harrison Peck<br>& Associates PC                     | Consultation/Practice Management                        | N/A  | 03/1992                   | Open-Ended                  | 20-25 referral calls,<br>6 billable projects   |
| I.C. System, Inc.                                    | Collections   | \$3,921.00   | 09/1986                   | Open-Ended                  |  |
| James Baker<br>& Associates                          | Non Pension Investment<br>Portfolio Management          | N/A  | 02/1999                   | Open Ended                  |  |
| LDS Communications                                   | Long Distance Service/Internet Access                   | \$109.00   | 06/1997                   | 06/1998                     |  |
| MBNA   | Banking/Credit Card Program                             | \$7,500  | 11/13/97                  | 11/13/2002                  | 159 accounts   |
| Oklahoma Centralized<br>Verification<br>Organization | Credentials Verification                                | 0  | 08/1996                   | 08/2001                     | Processed over 5,300 applications<br>including both the initial<br>application process, as well as the<br>centralized reappointment program. |
| PLICO  | Liability Insurance                                     | PLICO contributes a<br>substantial amount<br>to OSMA each year.<br>(See PLICO Report to Board of Trustees) | OSMA<br>owns PLICO        | N/A                         | 4,200 Insureds (MDs & DOs)   |
| PLICO Health   | Health Insurance  | N/A  | OSMA owns<br>PLICO Health | N/A                         |  |
| TaxResource  | Consultation/Tax Audit                                  | \$2367.00  | 12/1995                   | Open-Ended                  | Total Memberships 131  |
| Travel the Continents<br>(TRAVCON)                   | Travel  | \$1554.00  | 08/1996                   | Open-Ended                  |  |
| Utica Physicians'<br>Association, Ltd (UPAL)         | OSMA Group Pension Program                              | \$1000.00  | 01/1993                   | 01/1998<br>(up for renewal) |  |

### Survey of Vendors/Services (continued)

| Vendor  | Service Provided | Non-Dues Revenue<br>"Accrued" in 1998 | Contract<br>Began | Contract<br>Ends | Participation by OSMA<br>Members during 1997   |
|---|------------------|---------------------------------------|-------------------|------------------|--|
| Oklahoma State<br>Medical Association<br>Seminars | Seminars         | Approximately \$8,000                 | N/A               | N/A              | <p><i>"Advanced Coding for Physician Services"</i><br/>7 attendees in Woodward; 21 attendees in Tulsa; and 22 attendees in Oklahoma City.<br/>(Presented by Thomas &amp; Associates), February, 1998</p> <p><i>"Evolution &amp; Management Coding and Documentation"</i><br/>8 attendees in Woodward; 35 attendees in Tulsa; and 48 attendees in Oklahoma City.<br/>(Presented by Thomas &amp; Associates)</p> <p><i>"Medicare Fraud &amp; Abuse"</i><br/>36 attendees in Oklahoma City. Tulsa seminar had to be canceled. October, 1998</p> <p><i>"Basic Coding for Physicians Services"</i><br/>20 attendees in Oklahoma City, 12 attendees in Tulsa, January 7 &amp; 14, 1999.</p> <p><i>"Evolution &amp; Management Coding and Documentation"</i><br/>27 attendees in Oklahoma City, 10 attendees in Tulsa, Jan. 7 &amp; 14, 1999.</p> <p><i>"Computers Made Easy"</i><br/>Limited seating: 19 attendees in Oklahoma City, 17 in Tulsa, February 10-11, 1999.</p> <p><i>"Basic Coding for Physicians Services"</i><br/>10 attendees in Stillwater, February 19, 1999.</p> <p><i>"Introduction To The Web"</i><br/>Limited seating: 16 attendees in Oklahoma City, 15 attendees in Tulsa, February 24-25, 1999.</p> <p><i>"Managing Managed Care"</i><br/>Scheduled for Oklahoma City on March 24 and Tulsa on March 31, 1999.</p> <p><i>"Compliance Program-Legal Introduction"</i><br/>Scheduled for May, 1999 in Oklahoma City, Tulsa, and Ardmore.</p> <p><i>"Basic Coding for Physicians Services"</i><br/>Scheduled for June, 1999 in Oklahoma City and Tulsa.</p> <p><i>"Office Procedures"</i><br/>Scheduled for August, 1999 in Oklahoma City and Tulsa.</p> <p><i>"Investment Counseling"</i><br/>Scheduled for September, 1999 in Oklahoma City and Tulsa.</p> <p><i>"Communications-Physician, Employees and Public Relations"</i><br/>Scheduled for Oklahoma City, Tulsa, and Lawton.</p> <p><i>"Reception &amp; Patient Flow"</i><br/>Scheduled for November in Oklahoma City, Tulsa, and Lawton.</p> |

#### James Baker and Associates

The Council on Member Services voted to promote the James Baker & Associates firm as a Preferred Vendor in February, 1999. Created in 1979, JBA is one of the largest independently owned investment services firms domiciled in the state of Oklahoma. The firm purposefully designed an Investment Program to offer nonpension investment services to OSMA members that are unique from other

large brokerage firms and financial planners. James Baker & Associates will travel anywhere in OK to meet with OSMA members to present a personalized investment evaluation, offering OSMA members a confidential relationship with a disciplined investment strategy tailored to the members goals, objectives, and tax considerations.

#### Council on Members Services Subcommittees

##### OSMA Liaison Committee on Medical Schools

The Committee met on January 29, 1999 and February 26, 1999 with representatives from various associations to discuss and pursue further a satellite program similar to that which currently exists in Colorado

## OSMA Preferred Vendors

**AutoFlex Leasing:** AutoFlex leasing is located in Dallas, Texas, and is recommended by several state medical associations. It offers very competitive prices and services to physicians that lease or purchase automobiles. They will arrange to pick up and deliver anywhere in the state of Oklahoma for OSMA members.

**C.L. Frates and Company:** OSMA recommends the following insurance programs offered by C.L. Frates and Company: Business Overhead Expense; Disability Income; Group Term Life; Hospital Indemnity; Accidental Death and Dismemberment; High Limit Term Life, and Workers Compensation Plan.

**Conomikes Reports, Inc.:** Conomikes Reports provides medical publications of interest to the physicians and their office staff, such as the Conomikes Medicare Hotline, Conomikes Reports, Managed Care Handbook, etc.

**Harrison Peck & Associates, PC:** Harrison Peck & Associates has developed a wide scope of services to respond to the changing needs of their clients, including coding analysis, billing services, and practice management. Harrison Peck Associates provides initial telephone consultations to OSMA members at no charge. If the member needs additional services, Harrison Peck will make an on-site conference visit to discuss the consulting services available and financial obligations at that time.

**I.C. Systems:** I.C. Systems is a nation-wide accounts receivable management company that provides collection services to clients in all 50 states. Established in 1938, I.C. Systems has grown to be one of the largest privately-owned collection agencies in the country, noted for its ethical and progressive services.

**Intermedia/LDS Communications:** Intermedia offers simple 1+ dialing, WATS, private lines, 800 services, tele/video conference calling, as well as full, direct Internet access and complete WWW services.

**James Baker & Associates:** James Baker & Associates, created in 1979, is one of the largest independently owned investment services firms domiciled in the state of Oklahoma. The firm purposefully designed an OSMA Investment Program to offer nonpension investment services to members that are unique from other large brokerage firms, trust departments, and financial planners. JBA will travel to anywhere in Oklahoma to meet with OSMA members to present a personalized investment evolution, offering members a confidential relationship with a disciplined investment strategy tailored to the members goals, objectives, and tax considerations.

**MBNA:** Through a special arrangement with MBNA America Bank, one of the nation's largest issuers of affinity credit cards, OSMA offers to its members an Oklahoma State Medical Association MasterCard credit card program. The card offers a low introductory annual percentage rate for balance transfers and cash advance checks. Once you receive the card, OSMA receives a contribution from MBNA. Each year your account is renewed and every time you make a purchase, MBNA make another contribution to OSMA.

**Oklahoma Centralized Verification Organization (OCVO):** The OCVO offers an excellent service for OSMA members in that it centralizes the completion of applications for all the various managed care organizations and hospitals.

**PLICO:** The Physicians Liability Insurance Company provides recommended professional liability insurance to OSMA members. PLICO has been formed to provide an economical alternative to the commercial insurance industry. Through PLICO, state physicians will continue to enjoy unique benefits, high-quality coverage, program stability and premium savings they have maintained for some thirty-five years through the pooling of their professional liability insurance resources into a single company.

**PLICO Health:** Available only to members of the OSMA, their employees, and families. The PPO was created as a cost effective alternative to traditional health insurance. Guaranteed coverage means that insurance is provided without evidence of incurability, a pre-existing condition exclusion or participation requirements. Four deductible and co-pay options are offered.

**Quest Program:** Since 1994, Quest International has offered OSMA members a program that allows up to 50% discounts on hotel accommodations and similar discounts on restaurants, rental cars, and other travel amenities to club members.

**TaxResource:** TaxResources is an organization that provides representation to physicians in the event of an IRS tax audit. They provide full on-site services, plus newsletter, and telephone consultation for a yearly membership fee for both personal and business programs.

**Travel the Continents:** TravCon-Travel the Continents provides shorter length, first-class deluxe trips that are value-priced. Innovative itineraries combine the best of land and cruise programming. Flexibility to choose pre and/or post tours are the option of the traveler. Credit cards are accepted for all payments. Continuing Medical Education programs are presented at a modest fee on the majority of the TravCon tours.

known as Colorado Personalized Education for Physicians (CPEP).

Elizabeth Korinek, Executive Director, CPEP has joined the meetings via phone conference. At the most recent meeting the committee formed a task force consisting of Harold Thiessen, MD, Director, OSMA Physician Recovery Program; Lyle Kelsey, Executive Director, Oklahoma Board of Medical Licensure; Craig Jones, President, Oklahoma Hospital Association; Gary Clark, Executive Director, Oklahoma State Board of Osteopathic Examiners; Brian

Foy, Executive Director, OSMA to study further this collaborative effort. The task force will meet and develop specific recommendations and forward to the OSMA Board of Trustees for approval.

### Conclusion

The Council on Member Services will make every attempt to continue to provide high-quality educational programs for the physicians and their office staff, as well as provide competitive, quality services through the preferred vendor programs. The Council welcomes any and all com-

ments and suggestions regarding any of the member service activities. The Council would also like to thank Brian Foy, Barbara Matthews, and Michele Doyle Smith for their support and administrative services.

Respectfully submitted,

William Bernhardt, MD, Chair, Midwest City  
Daron Street, MD, Tulsa  
Matthew J. Britt, MD, Oklahoma City  
Tim S. Caldwell, MD, Tulsa

Donald C. Karns, MD, Enid  
Gene L. Muse, MD, Oklahoma City  
James J. Snipes, MD, Tulsa  
Jeffrey M. Spear, MD, Poteau  
S. Fulton Tompkins, MD, Oklahoma City

## ■ REPORT OF THE COUNCIL ON MEDICAL EDUCATION

Reference Committee III (A-99)

Subject: Annual Report

Presented by: Roger Sheldon, MD, MPH,  
Chair

Referred to: Reference Committee III

### Introduction

The OSMA Council on Medical Education studies and makes recommendations related to all matters of maintaining or improving the level of medical competency in Oklahoma, including but not limited to, maintaining liaison with other emerging health professionals or occupations, and to accrediting medical education providers in Oklahoma. The Council also monitors CME standards, as they may be required by Association policy.

### Review of Activities

#### Accreditation Review Committee

Since the last report to the House of Delegates (April 1998) the Accreditation Committee has approved the following:

- *Site Survey Reports*

Integris Southwest Medical Center - Two year accreditation  
Deaconess Medical Center - Four year accreditation  
Saint Francis Health Systems - Four year accreditation  
Jane Phillips Medical Center - Four year accreditation  
Valley View Regional Hospital - Two year provisional accreditation (new accredited institution)  
Orthopaedic & Reconstructive Research Foundation - Two year provisional accreditation (new accredited institution)

- *Interim Reports*

Duncan Regional Hospital  
Stillwater Medical Center  
St. Anthony Hospital  
Jane Phillips Medical Center  
Integris Baptist Medical Center  
Hillcrest Medical Center  
Institute of Mental Health  
Norman Regional Hospital

- *Pre-Applications*

Carl Albert Indian Hospital

### Other Business

- *OSMA Accreditation*

On September 17-19, 1998, Roger Sheldon, MD and Barbara Matthews, OSMA CME Coordinator attended the Accreditation Council for Continuing Medical Education (ACCME) State Conference in Chicago to review System 98 CME changes. During that time Dr. Sheldon and Ms. Matthews completed the reverse site visit for OSMA accreditation. The OSMA was recently awarded a four year accreditation with an Interim Report due in one year.

- *CME Joint Sponsorship*

The OSMA Council on Medical Education is currently working with Deaconess Hospital and Hillcrest Hospital in Tulsa to Joint Sponsor programs coordinated by the OSMA Geriatrics Task Force and the Council on Member Service. Both programs will provide physicians CME Category 1 hours.

- *CME Activities printed in OSMA Journal*

In March of 1999 the OSMA Journal began printing CME Activities sponsored in state. OSMA Accredited Sponsors, as well as the Irwin Brown Office of Continuing Medical Education are listed in the Journal.

- *Oklahoma Alliance for Continuing Medical Education (OkACME)*

The Council was active in the support of the OkACME fall conference held October 6, 1998 in Oklahoma City. Dr. Roger Sheldon as well as Brian Foy and Barbara Matthews presented information regarding CME Site Surveyor Training and a beginning CME course for new applicants. OSMA sponsored the conference with an unrestricted educational grant. The OSMA will also be co-sponsoring a summer OkACME conference on June 4, 1999. Murray Kopelow, MD, ACCME Executive Director as well as Bruce Belende, Executive Director of the Alliance for Continuing Medical Education will be presenting information regarding System 98 the new CME accreditation system.

- *CME Activity*

Since the mandatory CME requirements were implemented in June of 1997 the OSMA CME Office has mailed 18 pre-applications to prospective institutions seeking OSMA accreditation. Of the 18 pre-applications mailed, four were approved by the Council and application materials were mailed. The Council accredited two new institutions this year: Valley

View Regional Hospital, in Ada, and the Orthopaedic & Reconstructive Research Foundation in Oklahoma City. The Council met May 26, 1998, October 27, 1998 and March 11, 1999.

- *OSMA Council on Medical Education Accredited Institutions*

Deaconess Hospital  
Norman Regional Hospital  
Duncan Regional Hospital  
Orthopaedic & Reconstructive Research Foundation  
Hillcrest Medical Center  
Integris Southwest Medical Center  
Institute for Mental Health  
Integris Baptist Medical Center  
Jane Phillips Medical Center  
St. Anthony Hospital  
Mercy Health Center  
Saint Francis Hospital  
Stillwater Medical Center  
St. John Medical Center  
Valley View Regional Hospital

### Conclusion

The Council on Medical Education continues to meet via video teleconferencing through the campuses of the OU College of Medicine-Oklahoma City and the OU College of Medicine-Tulsa. This allows a larger attendance and better interaction between both sites. In the next two years the Council will be working to implement the new System 98 changes and have this information disseminated to the Accredited Institutions.

Respectfully submitted,

Roger E. Sheldon, MD, MPH, Chair  
B. Bhushan Sharma, MD, Vice Chair  
Jana Armstrong, MD  
Amar Bhandary, MD  
Rick Brittingham, MD  
Antonio DeLeon, MD  
William H. Hall, MD  
Timothy Holder, MD  
June Holmes, EdD  
Donald Karns, MD  
Bruce Naylor, MD  
John Nelson, MD  
John Nettles, MD  
William Oehlert, MD  
Jim Romero, PhD  
John Saxon, MD  
William R. Smith, MD  
Eric Westerman, MD  
Renee Willis, MD

## ■ REPORT OF THE COUNCIL ON MEDICAL ETHICS AND COMPETENCY

FILED FOR INFORMATION

Reference Committee: III (A-99)

Subject: Annual Report

Presented by: James Funnell, MD

Referred to: Reference Committee III

### Introduction

The purpose of the Medical Ethics and Competency Committee is to investigate general ethics conditions and questions of medical ethics whether the same is presented as a general question or a specific grievance or complaint, and to make recommendations to the Board of Trustees and the House of Delegates in regard to the establishment of principles and interpretations of medical ethics.

### Review of Activities

Three letters have been forward to local counties for adjudication, two letters referred to the Oklahoma Hospital Association and one to the Oklahoma State Board of Medical Licensure and Supervision.

Meetings will be scheduled as needed.

Respectfully submitted,

James Funnell MD, Chairman,

OSMA President, 1992

Jay Gregory, MD,

OSMA President, 1994

David L. Harper, MD,

OSMA President 1996

Larry Long, MD, OSMA President, 1995

Billy Dale Dotter, OSMA President 1991

Mary Kay Gumerlock, MD, Oklahoma City

Kevin Donovan, MD, Tulsa

## ■ REPORT OF THE PHYSICIANS RECOVERY COMMITTEE

FILED FOR INFORMATION

Reference Committee: III (A-99)

Subject: Annual Report

Presented by: James Gormley, MD

Referred to: Reference Committee III

### Introduction

The OSMA Physician Recovery Program, which started in 1983, continues to maintain an effective statewide non-coercive advocacy program for identifying, contacting and offering rehabilitative help, on-going monitoring for licensure and other purposes for health care profession-

als (MD, DO, DDS, DVM, PA) suffering from alcoholism, substance dependence and other addictive disorders. The PRP also serves as a confidential, informational support and referral source for physicians, other health care professionals and spouses for behavioral health issues as well as physical impairments.

### Review of Activities

The Physicians Recovery Committee reviewed several issues during the past year:

- Physician Recovery Program Budget — included salary increases for the Program Director and Associate Director. Approved by the Board of Trustees at their October meeting.

- Physicians Recovery Brochure — Brochure developed by the Director of the Physicians Recovery Program with help from Public Strategies, an Oklahoma City based public relations firm. Brochures were mailed to every physician member of the Association as well as distributed to the Oklahoma Dental Association, Osteopathic Association, Hospital Association and the Medical Schools in Oklahoma City and Tulsa. Brochures will be duplicated when needed.

- Fourth Annual Oklahoma Physicians in Recovery Retreat — January program held in Tulsa was co-sponsored by the Oklahoma Society of Addiction Medicine. CME credits were received for this two-day program.

- The Physicians Recovery Program has formal relationships with the Oklahoma Osteopathic Association, Oklahoma Dental Association and the Oklahoma Veterinarian Associations. Contributions were made in the amount of \$26,000 to offset the expenses of the Physicians Recovery Program.

- A Medical Student was added to the Committee beginning in April of 1998.

### Conclusions

The Committee will continue to work with the Physicians Recovery Program Director and members of the Association as an outreach to support and monitor medical professionals throughout Oklahoma who are experiencing difficulty with substance abuse.

Respectfully submitted,  
James B. Gormley, MD, Chair  
Clarence Roberts, MD  
James R. Rhymer, MD

Lanny G. Anderson, MD  
Jimmy C. Couch, MD  
Billy H. Stout, MD  
Frank Crowe, MD  
G. David Casper, MD  
Richard T. Brittingham, MD  
Harold Thiessen, MD  
William O'Melia, MD

## ■ REPORT OF THE PHYSICIANS RECOVERY PROGRAM

FILED FOR INFORMATION

Reference Committee: III (A-99)

Presented by: Harold Thiessen, MD

Director, Physicians Recovery Program

Referred to: Reference Committee III

### Introduction

It is the purpose of the Committee to create and maintain an effective statewide non-coercive advocacy program (Physicians Recovery Program-PRP) for identifying, contacting and offering rehabilitative help, ongoing monitoring for licensure and other purposes for physicians suffering from alcoholism, substance dependence or other disorders. The PRP also serves as a confidential informational support and referral resource for physicians and other health care professionals and their significant others for other behavioral health issues as well as physical impairments.

The OSMA Physician Recovery Program continues to be among the leaders nationally in identifying, assisting in treatment and returning to practice physicians who have suffered from substance abuse dependency.

An important part of the program continues to be providing documentation of the treatment and recovery status of physicians and other health care professions for Licensing Boards, Drug Registration Agencies, Insurance Carriers and Hospital Health Maintenance Organizations.

### Review of Activities

The PRP has formal relationships with the Oklahoma Osteopathic Association, Oklahoma Dental Association and Oklahoma Veterinarian Association. At the present the program enjoys a very credible and excellent working relationship with the Licensing Boards. PRP works informally with other health care professionals such as physicians assistants and psychologists as well as with medical and dental students. The recovery program also coordinates the after care for two health care professionals from other states who are presently residing in Oklahoma.

The PRP continues to be among the leaders nationally in identifying, assisting in treatment and returning to practice physicians suffering substance abuse/dependency.

With appropriate treatment in a center that is geared for health professionals, PRP is enjoying a ninety (90) percent recovery rate with ninety-five (95) percent of the participants returning to practice.

On July 20, 1998, both the PRP Director and Jay Lea, DDS, Dental Liaison to the PRP, spoke to the dental students on the subject of "Chemical Dependency in Dentists and the PRP"

August 1, 1998, the PRP Director spoke to the Dental Association Committee on membership services and received a very warm reception. Out of this presentation came a request to write an article for publication in the October, 1998 *Dental Journal*. G. Douglas Talbott, MD, spoke to the Oklahoma Board of Medical Licensure and Supervision on November 12, 1998, and was very well received. On November 19, 1998, the PRP Director spoke at a CME meeting at Mercy Hospital and was very well received. January 19, 1999, the PRP director helped arrange a visit for Jerry Gropper, DDS, to speak to the Dental Board of Governors. On April 19, 1999, PRP representatives will speak to freshmen medical students. This has been an annual speaking engagement for several years and is considered by the medical students to be one of their highlights.

As of March 20, 1999, approximately six hundred (600) Oklahoma health care providers are or have been involved with the Physicians Recovery Program. Calculated on a twenty (20) percent incident of addiction problems in health care professionals, this means PRP has now probably worked with fifty (50) percent of the at risk health care providers in the state. During this past year, the program has had fifty-two (52) contacts; thirty (30) interventions and/or evaluations (personally or by telephone); thirty (30) professionals; one (1) medical student; one (1) physician's assistant and one (1) respiratory therapist entering into treatment; fourteen (14) MDs, eight (8) DOs; five (5) DDSs, one (1) DVM, and two (2) others. There were fourteen (14) health professionals who had a multi-disciplinary assessment done, some which resulted in treatment for one (1) disruptive physician. In addition, the program works with a large number of spouses, significant others and family members.

The Fourth Annual Oklahoma Physicians in Recovery Retreat was held January 15-17, 1999, at the Marriott Hotel and Conference Center in Tulsa and was

co-sponsored by OKSAM. There were ninety (90) in attendance. Five point five (5.5) CME credits for attendance were given. The meeting had speakers from both within and out of state.

New brochures have been printed and distributed to individual members, OSMA, OOA, ODA, hospital staff, medical societies and other organizations. Please note the section concerning our relationship to Oklahoma Board of Medical Licensure and Supervision that we are able to negotiate.

The Director served on the "Loss of License" committee which was chaired by William Hall, MD, and a report from that committee has been forwarded to the Board of Trustees. The Director is serving on the Liaison Committee to Medical schools, chaired by John Alexander, MD. This committee is looking into a program for re-medical education of physicians in need. The Director has been consulted and provided information to the Texas Medical Association as they are in the process of developing a physicians health care program for their state.

During 1998-99, the Director has attended the South East Coastal Conference in Addictions (February, 1999); ASAM (April, 1998); International Conference in Physicians Health (April, 1998) along with the simultaneously held Annual Federation of Physicians Health Programs; and the Western District Meeting of Federation of Physicians Health Programs in Santa Fe, New Mexico (September, 1998). The Director will be attending the National Meeting of Federation of Health Programs in St. Louis, Missouri on April 21, 1999.

Respectfully submitted,

Harold Thiessen, MD  
Director, Physicians Recovery Program

## ■ REPORT OF THE INTERNATIONAL MEDICAL GRADUATE COMMISSION

FILED FOR INFORMATION  
Reference Committee III (A-99)  
Subject: Annual Report  
Presented by: Kautilya Mehta, MD  
Referred to: Reference Committee III

### Introduction

The Commission on International Medical Graduates (IMG) was organized as a liaison to the Oklahoma State Medical Association on matters impacting all international medical graduate physi-

cians practicing in Oklahoma.

### Review of Activities

The IMG Commission will continue to direct its efforts toward accomplishing the following goals:

1. To address the special needs and problems pertaining to the IMG physicians in the State of Oklahoma (especially the problems pertaining to licensure, hospital privileges, HMO/PPO participation, residency training, etc.)
2. To promote IMG's membership in the OSMA and AMA and to increase their participation and involvement in organized medicine.
3. Continue to work towards uniformity of rules with respect to the licensing of American Medical Graduates and International Medical Graduates.

The IMG Commission has prepared a resolution to be submitted to the OSMA House of Delegates at this annual meeting requesting the OSMA to ask the Oklahoma State Board of Medical Licensure and Supervision (OSBMLS) to change their ruling whereby a license to practice medicine will be denied to any candidate who has failed three times in any step of the licensing examination. The resolution urges the OSBMLS to adopt the recommendation of United States Medical Licensing Examination (USMLE) which recommends that each step be passed within six attempts.

4. Continue to work closely with the American Medical Association's IMG Section.

In July 1998 the Educational Commission for Foreign Medical Graduates (ECFMG) started a "Clinical Skill Assessment" test to evaluate the IMG's clinical competence and ability to communicate effectively in the English language. This test will require the candidate to take a history, conduct physical examinations, and present a treatment plan for the "model patient." The test will require a working knowledge of commonly used terminologies, understanding the accent, and understanding the appropriate method of conducting a physical examination of the patient. The test consists of a 15-minute physical on a patient (physicians assistants and nurses assistants act as patients) and a 10-minute written test. Mr. Charles Willis with the AMA's IMG Department is monitoring the pass/fail rate for this test, although at this time he has no conclusive information. In July of 1999,

after the testing has been in place for a year, results should be available.

#### 5. Representation at National Meetings

Drs. Kautilya Mehta, Oklahoma City, Mukesh Parekh, Oklahoma City, and Sanku S. Rao, Enid attended the AMA Interim meeting held in December, 1998. They were instrumental in helping to pass a resolution submitted by the IMG Section of the AMA, which will be submitted at the next AMA House of Delegates meeting in June, 1999. This resolution resolves that the IMG Section ask the AMA to discuss with appropriate medical licensing authorities in all states the extreme arbitrariness of the rules regarding the number of failures at licensing examination.

#### 6. Encourage International Medical Graduates to become active members of the AMA's International Medical Graduate Section.

A memo from Dr. Kautilya Mehta, Chair of the OSMA's Commission on International Medical Graduates, was mailed to all IMGs in September 1998 informing them of the new externship program and encouraging participation and membership in the IMG Section of the AMA. There is no cost to join this Section, and physicians can obtain an application form by calling the OSMA headquarters. Dr. Mehta also urged membership in the OSMA AMA. With all the problems existing for the medical profession in general, and for IMG's in particular, being a part of organized medicine is the best way to protect a physician's professional interests.

#### 7. Promoting the Mini-Externship Program

This program was proposed and approved by the Commission in August 1998. It was established for international medical graduates seeking residency positions in the USA. The purpose for the externship will be to help the IMG (residency) candidates to learn the methodology of obtaining a patient's medical history and conduct patient physical examinations, as it is being done in this country, since this may be different from the country of their medical training. They will learn only by observing the sponsoring physician and without any direct contact with the patient or patient's medical records.

Sponsoring physicians will accept one Extern for a period of three weeks. An

Extern will be allowed to have four such (3-week) rotations each with a sponsor in different specialties. The candidate for Externship will contact the IMG Commission of the OSMA in writing, giving details of his/her educational background, areas of interest, preferred geographical location and period of time for Externship.

As of February 1999 seven IMGs are participating in the program. Although there have been inquiries from IMGs residing in other states, the Commission has agreed the program should be restricted to IMGs residing in Oklahoma. Dr. Kautilya Mehta, Chair, has developed an evaluation form for sponsoring physicians to complete after their Extern's rotation is complete. This will help to evaluate the success of the program.

#### Conclusion

The Commission on International Medical Graduates appreciates the support of the OSMA Board of Trustees in its endeavor to work with the State Board of Medical Licensure and Supervision to obtain uniformity of rules when licensing American Medical Graduates and International Medical Graduates.

Respectfully submitted:

Kautilya Mehta, MD, Chair  
Saeed Ahmad, MD  
Nelson Bocar, MD  
Juan Gonzalez, MD  
Emmanuel Macaraeg, MD  
Kyung What Min, MD  
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#### ■ REPORT OF THE OKLAHOMA MEDICAL POLITICAL ACTION COMMITTEE

FILED FOR INFORMATION  
Reference Committee III (A-99)  
Subject: Annual Report  
Presented by: Jeffrey Shaver, MD, Chair  
Referred to: Reference Committee III

#### Introduction

The Oklahoma Medical Political Action Committee is a voluntary, bi-partisan, unincorporated entity comprised of OSMA members, OSMA staff and OSMA Alliance members interested in supporting political candidates. Primarily, OMPAC is an independent and autonomous organization managed by its own Board of Directors. The Board of Directors has authority over all policies and activities of the political action committee and serve without compensation. The OMPAC Board conducts the business of the committee and meets periodically to consider the contribution of OMPAC funds to candidates for public office who support OSMA's legislative agenda.

#### Review of Activities

OMPAC has conducted four (or five) solicitations for membership thus far for 1999. A separate OMPAC solicitation card was mailed to each physician's office with their 1999 OSMA dues statement in the fall of 1998. As was the case in 1998, the separate solicitation was necessary due to strict Oklahoma Ethics Commission rules. In January 1999 a letter was mailed to all 1998 contributors with a year end report detailing all contributions made by OMPAC to candidates during the 1997-98 election cycle. Also included was a report showing the contributions AMPAC made on our behalf to Oklahoma's congressmen. Also in January, the OSMA Alliance OMPAC chair mailed a solicitation letter to all Alliance members in the state. In early February a letter was mailed to the homes of all physicians who had not joined OMPAC by that time. This letter pointed out the various battles that will be fought at the capitol during this legislative session on behalf of physicians and their patients.

OMPAC has a marketing budget of \$7,000 from the American Medical Political Action Committee, and to date has been reimbursed for \$2,400 of costs associated with soliciting members. AMPAC has also printed a new brochure for OMPAC and has absorbed the entire cost for this project.

The OMPAC Board voted to run a quarterly ad in the OSMA Journal, and to pay for the ad if necessary. This quarterly ad will list OMPAC members and their level of support, and will serve not only as a thank you to the members, but also as an incentive to other physicians throughout the state to join their colleagues in supporting their political action committee.

The OMPAC Board has voted to support the following legislators thus far in 1999 with the contributions listed below:

|             |  |       |
|-------------|--|-------|
| District 18 | Representative Lloyd Fields, McAlester     | \$250 |
| District 83 | Representative Fred Morgan, Oklahoma City  | \$500 |
| District 90 | Representative John Nance, Bethany         | \$250 |
| District 44 | Representative Bill Nations, Norman        | \$250 |
| District 47 | Representative Susan Winchester, Chickasha | \$500 |
| District 43 | Senator Ben Brown, Oklahoma City           | \$250 |
| District 17 | Senator Brad Henry, Shawnee                | \$250 |
| District 42 | Senator Dave Herbert, Midwest City         | \$250 |
| District 9  | Senator Ben Robinson, Muskogee             | \$500 |

Kathy Musson, OMPAC Director, and Judy Lake, OMPAC Assistant, attended an AMPAC meeting in Chicago in February 1999. During this strategy meeting, staff members from state PACs had the opportunity to discuss a number of issues affecting PAC membership. Topics covered included AMPAC political contributions, membership goals and methods of solicitation, the role of the AMPAC Board of Directors, discussion of various AMA and AMPAC political education programs, and details of the AMPAC Grassroots Grant Program.

### OMPAC Financial/Membership Report 1st Quarter (As of March 22, 1999)

#### Financial:

|  |                    |
|--|--------------------|
| 1998 Carryover Balance                   | \$17,024.45        |
| Total Contributions Deposited in 1999    | 32,430.00          |
| Subtotal                                 | <u>\$49,454.45</u> |
| Less Dues paid to AMPAC                  | \$8,900.00         |
| Less Administrative Expenses             | 275.18             |
| Less Contributions to Candidates in 1999 | <u>2,750.00</u>    |
| Subtotal                                 | <u>\$11,925.18</u> |

|                           |                           |
|---------------------------|---------------------------|
| <b>Total Cash on Hand</b> | <u><u>\$37,529.27</u></u> |
|---------------------------|---------------------------|

#### Membership:

|  |            |
|--|------------|
| Alliance Members                           | 24         |
| OSMA Staff Members                         | 2          |
| Physician Members                          | <u>243</u> |
| <b>Total 1999 Membership as of 3/22/99</b> | <u>269</u> |

#### Contributions During 1997-1998 Campaign

The OMPAC Board once again based its support for candidates on an objective measure of each candidate's stand on the medical issues important to the OSMA. No contributions were based on the political affiliation of candidates. The key bill of paramount importance during the 1998 legislative session was SB 1192, "laser surgery for optometrists," and the Board voted to support to the maximum extent possible state legislative incumbents, with election challenges, who opposed SB 1192.

OMPAC did not prepare candidate questionnaires prior to the election this year because we have not had success with this in the past. As an alternative to the questionnaires, physicians, Alliance members and staff were asked to speak to candidates in their districts running in open seats or challengers to incumbents and report back to the Board with their recommendations for support.

In addition to making sizeable contributions, OMPAC members participated as hosts and sponsors of fundraising events for many candidates. OMPAC members and staff worked with candidates to provide extra support for their campaign efforts in the organization of the fundraisers, raising individual contributions from OSMA members and obtaining permission from OSMA members to be listed as hosts and sponsors of these events. OMPAC also sent special mailings to OSMA members in targeted legislative districts inviting them to fundraisers while providing reasons to support these candidates.

Attached to this report is the final report which lists OMPAC contributions to statewide and state legislative candidates for the 1997-1998 election cycle.

#### Conclusion

Elections for the OMPAC Board will take place during the 1999 OSMA annual meeting, during which time OMPAC will hold its annual meeting. Good leadership is critical to OMPAC's future success in enhancing OSMA's legislative efforts.

Respectfully submitted,

Jeffrey Shaver, MD, Chairman  
 Jack J. Beller, MD  
 Richard J. Boatsman, MD  
 Matthew J. Britt, MD  
 Chester L. Bynum, MD  
 J. Chris Carey, MD  
 Elaine N. Davis, MD  
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 James D. Funnell, MD  
 Jay A. Gregory, MD  
 David L. Harper, MD  
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 Douglas C. Hubner, MD  
 Mrs. Barbara Jett  
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 Perry A. Lambird, MD  
 Gary Massad, MD  
 Gary L. Paddack, MD  
 Mukesh T. Parekh, MD  
 Greg Ratliff, MD  
 Lee E. Schoeffler, MD  
 David M. Selby, MD  
 Michael Soper, MD  
 Bruce L. Storms, MD  
 Gary F. Strebel, MD  
 Mrs. Sherry Strebel  
 J. Ross Vanhooser, MD  
 Richard B. Winters, MD

## RESOLUTIONS

(NOT ADOPTED)

### **Resolution 1: Discrimination**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee I

*Whereas*, The AMA Bylaw B-I.50 Discrimination states that: "membership in any category of the American Medical Association or in any of its constituent associations shall not be denied or abridged because of sex, color, race, religion, disability, ethnic origin, sexual orientation, age, or for any other reason unrelated to character or competence. Nor shall membership in any category of the AMA or in any of its constituent associations be denied to any person who meets the requirements for membership as set forth in these Bylaws and in the Bylaws of the applicant's respective constituent association. In considering applicants for membership, information as to the character, ethics, professional status and professional activities of the individual may be considered;" therefore be it

*Resolved*, That the Oklahoma State Medical Association adopt as policy AMA Bylaw (B-I.50) on Discrimination and disseminate it to the membership via the most appropriate communications vehicle; and be it further

*Resolved*, That AMA Bylaw (B-I.50) become a part of the OSMA Policy Compendium.

(REFERRED TO BOARD OF TRUSTEES FOR FURTHER STUDY AND IMPLEMENTATION IF APPROPRIATE)

### **Resolution 2: Electronic Pre-certification**

(A-99)

Introduced by: Oklahoma County Medical Society

Referred to: Reference Committee I

*Whereas*, Many insurance carriers and HMOs require pre-certification prior to many of the consultations, specialty referrals, procedures, x-ray examinations, surgeries and hospitalizations; and

*Whereas*, This has resulted in physicians and hospitals having to add significant staff to obtain this pre-certification; and

*Whereas*, These staff positions spend endless hours attempting to contact the appropriate certifier at the insurance carriers and HMOs, are often on hold for prolonged periods, or obtain a persistent busy signal, and when finally reached, these certifiers are usually individuals without medical training; and

*Whereas*, a large percentage of pre-certifications are medically necessary based on the patient's clinical and/or lab, or radiographic findings; and

*Whereas*, Most of these requests are approved once the appropriate information is submitted; and

*Whereas*, All physicians are required to file insurance for their patients via electronic filing as of 1999; therefore be it

*Resolved*, That the OSMA support and develop a consortium to include physicians, hospitals, insurance carriers, HMOs etc. to develop and implement a list of criteria which, if fulfilled, would result in automatic pre-certification; and be it further

*Resolved*, That these criteria be accessible electronically by the physicians, hospitals and medical providers officers; and be it further

*Resolved*, That once these items have been approved then no further paperwork is required to complete certification, and retroactive decertification will not occur.

(ADOPTED)

### **Resolution 3: DEA Numbers for Marketing Purposes**

(A-99)

Introduced by: Tulsa County Medical Society

Referred to: Reference Committee I

*Whereas*, Pharmaceutical companies frequently use DEA numbers to track prescription trends of physicians and identify physician contacts while detailing medications; and

*Whereas*, Since the DEA number is intended to be used to track prescribing of controlled substances and not intended to be used to track marketing of pharmaceutical companies; therefore be it

*Resolved*, That the Oklahoma State Medical Association discourage the use of DEA numbers by pharmaceutical companies for marketing purposes.

(ADOPTED)

### **Resolution 4: Youth Risk Behavior Survey**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee I

*Whereas*, The Youth Risk Behavior Survey (YRBS) is a tool developed by CDC that measures the risk-taking behavior of adolescents; and

*Whereas*, Oklahoma is one of only eight states not conducting statewide YRBS; and

*Whereas*, Risk-taking behaviors that lead to morbidity and mortality are often established during youth; and

*Whereas*, YRBS data is used by other states to understand health behaviors among youth, and to create awareness among education, community, and public agencies regarding the health behaviors of youth; and

*Whereas*, YRBS provides the information needed to prioritize health education and health promotion goals; and

*Whereas*, Participation in a statewide YRBS would assist Oklahoma in tailoring its curricula, programs, and legislation to meet the specific health needs of its youth population; and

*Whereas*, A statewide YRBS sampling would provide up to date, scientific and generalized data, specific to Oklahoma's youth, and data on these behaviors does not currently exist within the state; and

*Whereas*, the Oklahoma State Department of Health has gathered YRBS data in 34 local Oklahoma school districts, and the data has proven useful for health policy, program evaluation, and for setting community development goals focused on youth; therefore be it

*Resolved*, The Oklahoma State Medical Association (OSMA) encourage all local school districts to consider participating in the YRBS as a means to gather data necessary to address the risk-taking behaviors of Oklahoma's youth; and be it further

*Resolved*, That OSMA encourage county medical societies to work with their private schools and local school boards in this effort; and be it further

*Resolved*, That OSMA leadership pursue legislative initiatives to see that this is accomplished statewide.

(NOT ADOPTED)

### **Resolution 5: OBMLS Licensing Examination Rule**

(A-99)

Introduced by: Council on International Medical Graduates

Referred to: Reference Committee I

*Whereas*, The Oklahoma Board of Medical Licensure and Supervision has adopted a new rule (effective July 1, 1999), whereby a license to practice medicine will be denied to any candidate who has failed three (3) times in any step of licensing examination (USMLE, NBME, FLEX or FMGEMS), and several candidates were denied licensure (also special license to start residency training) in the past even

when such a rule did not exist; and

*Whereas*, This rule is arbitrary and USMLE recommends that each step of the examination should be passed within six attempts; therefore be it

*Resolved*, That the OSMA ask the Oklahoma Board of Medical Licensure and Supervision to change this rule and adopt the recommendation of USMLE, which states in the 1998 Bulletin of Information that the USMLE program recommends that the limit for each step of the examination be set at no more than six attempts.

(ADOPTED)

### **Resolution 6: Tobacco Control**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas*, The States' Attorneys-General and the major US tobacco manufacturers have signed a Master Settlement Agreement restricting certain activities of the tobacco manufacturers and providing payments to the states; and

*Whereas*, Tobacco related disease is Oklahoma's leading preventable cause of death; and

*Whereas*, Diseases caused by nicotine addiction cost Oklahomans an estimated one billion dollars every year; and

*Whereas*, Every day over 40 Oklahoma children become addicted to nicotine; and

*Whereas*, The overall health status in Oklahoma has declined over the last decade, one of only two states in which this has occurred in part due to tobacco use; and

*Whereas*, The use of tobacco in Oklahoma is among the highest in the United States; therefore be it

*Resolved*, That the OSMA strongly support the position that all monies paid to Oklahoma in the Master Settlement Agreement and other agreements be utilized first to increase the budget for tobacco cessation and prevention programs including research, education, prevention, and treating nicotine addiction, especially in children and adolescents, and for treatment of diseases related to nicotine addiction and tobacco use; and be it further

*Resolved*, That the OSMA strongly support efforts to direct tobacco settlement monies not directed to other specific tobacco-control activities to increase patient access to medical services; and be it further

*Resolved*, That the OSMA work with the Oklahoma State Legislature and other groups to achieve public health goals and accomplish the issues addressed by our OSMA policies as well as AMA policies through state tobacco control legislation; and be it further

*Resolved*, That the OSMA undertake to publicize, support, and implement the elements of the policies that have not been adequately addressed by the Master Settlement Agreement and other agreements including, but not limited to:

- A complete ban on tobacco industry promotion, and advertising.
- Regulation of tobacco sales, including a ban on vending machines and mandate for behind-the-counter sales.
- Tax increases on tobacco products.
- Protection from environmental tobacco smoke.

(ADOPTED AS AMENDED)

### **Resolution 7: Environmental Tobacco Smoke**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas*, Environmental tobacco smoke is a real public health hazard, by some estimates being the third leading preventable cause of death in the United States; and

*Whereas*, Two non-smokers in Oklahoma die every day from second hand smoke; and

*Whereas*, Workers exposed to environmental tobacco smoke on the job are more likely to have respiratory problems; and

*Whereas*, Environmental tobacco smoke promotes asthma and other lung diseases; therefore be it

*Resolved*, That the Oklahoma State Medical Association work with the Tobacco Free Oklahoma Coalition (which includes, among others, the Oklahoma Chapters of the American Lung Association, the American Heart Association, and the American Cancer Society), the Oklahoma State Legislature and other appropriate organizations to assure that all public facilities will have clean air, free from tobacco smoke; and be it further

*Resolved*, That the OSMA Board of Trustees along with OSMA staff seek smoke free facilities for all OSMA events.

(ADOPTED)

### **Resolution 8: Rotavirus Vaccine**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas*, Immunization represents one of the most cost-effective means of disease prevention; and

*Whereas*, The Advisory Committee on Immunization Practices (ACIP) adopted in

June, 1998 the recommendation to routinely vaccinate all full-term infants with rotavirus vaccine; and

*Whereas*, Rotaviral infection of infants and toddlers threatens the health of young Oklahomans; and

*Whereas*, Rotaviral disease is the leading cause of severe, acute gastroenteritis in children; and

*Whereas*, Rotaviral disease results in approximately 3.5 million cases annually in the U.S. and causes approximately 20 to 40 deaths; and

*Whereas*, The national estimated health care costs associated with rotavirus infection are over \$1 billion annually; and

*Whereas*, Recent trials of rhesus rotavirus-tetravalent (rv) vaccine in the United States, Finland and Venezuela showed efficacy rates of approximately 80 percent for prevention of severe illness and 48 percent to 68 percent against rv-induced diarrheal episodes; and

*Whereas*, The establishment of practices to routinely immunize children and toddlers against rotaviral infection will greatly benefit the health of young Oklahomans; and

*Whereas*, An important strategy is to enlist the support and participation of the private medical community; therefore be it

*Resolved*, That the Oklahoma State Medical Association endorse the ACIP and the American Academy of Pediatrics recommendation to routinely vaccinate all full-term infants with rotavirus vaccine.

(ADOPTED)

### **Resolution 9: Clinical Preventive Services**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas*, The four leading causes of death in Oklahoma are heart disease, cancer, injuries, and cerebrovascular disease; and

*Whereas*, The rate for each of these diseases in Oklahoma exceeds the U.S. rate, and Oklahoma experiences a higher age-adjusted death rate than the U.S. population as a whole; and

*Whereas*, Many factors which contribute to these diseases in our state are avoidable or modifiable; and

*Whereas*, Potentially preventable factors result in a significant amount of morbidity and mortality among Oklahoma citizens, such as:

(1) Oklahoma ranks among the top ten states in per capita lives lost from smoking; an estimated 6,000 Oklahomans die

prematurely each year from tobacco-related diseases

- (2) Alcohol is a major cause of morbidity in the U.S. and in Oklahoma; in 1997, alcohol was implicated in 9,444 motor vehicle injuries and 200 fatalities in Oklahoma
- (3) Injuries are the number one killer of persons between the ages of 1 and 44.

*Whereas*, The United States Preventive Services Task Force (USPSTF), the authoritative body in the U.S. on clinical preventive services, has determined that certain clinical preventive services (i.e., screening and counseling delivered in physician's offices) can decrease the impact of these problems and result in improved patient outcomes; and

*Whereas*, USPSTF and the Office of Disease Prevention and Health Promotion of the U.S. Department of Health and Human Services, through the program "Put Prevention into Practice," make recommendations for clinical preventive services that prudent clinicians should provide their patients in the course of routine clinical care; therefore be it

*Resolved*, that the Oklahoma State Medical Association support efforts to promote clinical preventive services targeted towards the four leading causes of death in Oklahoma: heart disease; cancer; injuries; and cerebrovascular disease; and be it further

*Resolved*, that the Oklahoma State Medical Association pursue ways to promote Putting Prevention into Practice through the Physicians' Campaign for Healthier Oklahoma Task Force.

(ADOPTED AS AMENDED)

### **Resolution 10: Oklahoma Two-Year Old Immunization Levels**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas*, The annual 1998 Oklahoma Two-Year-Old Immunization Survey conducted by the Oklahoma State Department of Health indicates 73 percent of Oklahoma children received the basic immunization services by 24 months of age; and

*Whereas*, The 1998 Oklahoma Two-Year-Old Immunization Survey shows a decline in overall coverage from 74 percent in 1997 to 73 percent in 1998; and

*Whereas*, The national goal for the immunization levels of two-year-olds is 90 percent and the National Immunization Survey level reported on July 10, 1998 was 78 percent; and

*Whereas*, The National Immunization Survey results released by the Centers for Disease Control on March 12, 1999 showed an improvement to 78 percent, which ranks Oklahoma at 31 among other states, compared to July 10, 1998 when Oklahoma was one of two states with the second lowest immunization levels in the nation at 72 percent; therefore be it

*Resolved*, That the Oklahoma State Medical Association encourage physicians serving children to reduce barriers to vaccination; ~~such as: limited hours as to when vaccines are given;~~ to participate in the Oklahoma Statewide Immunization Information System; ~~assist in~~ encourage tracking and recalling children who are under-vaccinated; and to implement actions for reducing missed opportunities for vaccination. ~~such as use of simultaneous administration and elimination of invalid contraindications to vaccination.~~

(ADOPTED)

### **Resolution 11: Guns in Schools**

(A-99)

Introduced by: Oklahoma County Medical Society

Referred to: Reference Committee II

*Whereas*, Guns in schools are against school rules in all school districts; and

*Whereas*, Guns brought to school have been associated with multiple killings due to unknown motivations; and

*Whereas*, The AMA has adopted policy that all children bringing guns to school should be evaluated by a psychiatrist or psychologist, and has appointed its Council on Scientific Affairs to study the problem for possible solutions; and

*Whereas*, The AMA has supported the legal liability of gun owners whose firearms are brought to school and used in school related killings; therefore be it

*Resolved*, That the OSMA support legislation encouraging the routine psychological evaluation of all children bringing firearms to school; and be it further

*Resolved*, That the OSMA work with the Oklahoma Education Association and State Department of Education to bring about such routine evaluations.

(REFERRED TO THE BOARD OF TRUSTEES FOR FURTHER STUDY)

### **Resolution 12: Firearm Safety and Children**

(A-99)

Introduced by: Edward A. Legako, MD

Referred to: Reference Committee II

*Whereas*, Firearms constitute a major threat to the health and lives of young Oklahomans; and

*Whereas*, There were 163 fatal injuries and 590 non-fatal injuries from firearms among Oklahomans under the age of 21 in 1995 and 1996; and

*Whereas*, 2,856 Oklahomans of all ages sustained a firearm injury in this two-year period that resulted in death, hospitalization or treatment in a hospital emergency department (annual incidence rate of 45 per 100,000 population); and

*Whereas*, Of these injuries, 1,048 were fatal; and

*Whereas*, Nearly two-thirds of all firearm injuries in persons under age 15 were unintentional; and

*Whereas*, At least one percent of non-fatal firearm injuries resulted in permanent disability due to spinal cord injury; and

*Whereas*, 27 percent of survivors who were hospitalized were noted to have some type of dysfunction at discharge; and

*Whereas*, The average length of hospital stay for persons who were admitted was six days, with a range of one to 112 days, and average cost of stay of \$2,000 per day, excluding physicians' fees; and

*Whereas*, These costs are ultimately borne by taxpayers and insured individuals; therefore be it

*Resolved*, The Oklahoma State Medical Association (OSMA) endorse the following:

- a) mandatory inclusion of safety devices on all firearms, including built-in locks, loading indicators, safety locks on triggers, and increases in the minimum pressure required to pull triggers;
- b) legislation outlawing the Black Talon and other similarly constructed bullets;
- c) the right of local jurisdictions to enact firearm regulations that are stricter than those that exist in state statutes and encourage state and local medical societies to evaluate and support local efforts to enact useful controls;
- d) education programs for more responsible use and storage of firearms, in conjunction with other interested groups; and
- e) maintaining the current waiting period and background check required for all handgun purchasers; and be it further

*Resolved*, The OSMA supports increasing efforts to reduce pediatric firearm morbidity and mortality by encouraging its members to:

- a) inquire as to the presence of household firearms as part of childproofing the home;
- b) educate patients to the dangers of firearms to children;
- c) encourage patients to educate their children and neighbors as to the dangers of firearms;

- d) routinely remind patients to obtain firearm safety locks, to store firearms under lock and key, and to store ammunition separately from firearms; and
- e) endorse Child Access Prevention (CAP) laws similar to those now held by at least 15 states, which hold parents and guardians criminally liable if a child gains access to their improperly stored firearm and uses it in an intentional or unintentional injury to themselves or to another person.

(FIRST RESOLVE ADOPTED)

(SECOND RESOLVE REFERRED TO THE BOARD OF TRUSTEES FOR CLARIFICATION AND FURTHER STUDY)

### **Resolution 13: Substance Abuse Task Force**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee II

*Whereas, The State of the State's Health Report published on March 3, 1999 demonstrated that substance abuse-related mortality is a major cause of death and the leading cause of potential years of lives lost; and*

*Whereas, On March 26, 1997, Governor Frank Keating issued Executive Order 97-06 creating a special Governor's Task Force on Substance Abuse; and*

*Whereas, The 15 members of the Task Force, with the cooperation of the agencies of the state government and the major state universities, issued their report on substance abuse in Oklahoma in May of 1998; and*

*Whereas, This report made several recommendations to decrease substance abuse in Oklahoma,*

*Resolved, That the OSMA publicly commend Governor Keating and his Substance Abuse Task Force for this great service to the people of Oklahoma; and be it further*

*Resolved, That the OSMA endorse and actively support the following recommendations:*

1. Oklahoma's prevention, education and treatment functions related to substance abuse should be consolidated under the auspices of a distinct, centralized agency which has as its central focus the problem of substance abuse.
  - 1a). A secondary primary recommendation related to the first, should the concept of a separate umbrella substance abuse agency not be implemented: an expansion of the Mental Health Board from seven to 10 members, with the three additional members drawn from the field of substance abuse treatment.

2. All clients seeking or sentenced to services from state agencies (welfare, unemployment, prisons, juvenile justice, mental health, etc.) should be thoroughly assessed for signs of substance abuse and be encouraged, and where appropriate, required to enroll in counseling, treatment or prevention programs administered by private agencies or by the proposed Department of Substance Abuse. This is especially vital for those entering the criminal justice system, where untreated substance abuse is a primary indicator of recidivism.
3. Oklahoma should prohibit the sale of cold canned or bottled beer for off-premises consumption.
4. Licensing and enforcement of laws related to low-point beer should be transferred to the ABLE Commission. This function could be funded by increasing beer license fees.
5. In-prison substance abuse treatment programs should be broadly expanded throughout Oklahoma's penal and juvenile justice systems. Every long-term incarceration facility should implement and make available programs like the successful PRIDE effort (a volunteer, therapeutic community currently in a private prison in Holdenville, OK). For inmates assessed as having primary substance abuse problems, successful treatment and continued urinalysis and participation in recovery programs should be a primary condition of release from state custody.
6. Oklahoma should reduce the DUI threshold from .10 to .08.
7. Oklahoma should pass and rigorously enforce a vehicle seizure law that leads to the confiscation of vehicles driven by second and subsequent DUI offenders.
8. The proposed Department of Substance Abuse should conduct a detailed annual survey of drug and alcohol use among young people, providing a periodic "pulse" measuring the effectiveness of prevention programs. We test students each year for math mastery; we should also sample for behaviors that could kill them.
9. The Law Enforcement Partnerships of the Governor's Discretionary Fund currently allocates just 10 percent of its \$1 million annual budget to effective law enforcement school partnerships like the DARE program; half of the partnerships' funds underwrite area prevention resource centers which are one step removed from actual classroom lessons. Law enforcement partnerships should receive at least 25 percent

(approximately \$4 per student) of these funds, and every effort should be made to assure that drug free school funds are spent in the classroom where they are most effective.

10. All state taxes collected on beer and distilled spirits, which are directed to the General Fund should be allocated for substance abuse treatment.
11. If Oklahoma receives funds from a projected national tobacco settlement, a substantial portion of those funds should be utilized to support effective substance abuse prevention programs.
12. Education in substance abuse should be a mandatory part of the teacher preparation process in our colleges and universities.
13. All state agencies should develop and implement a comprehensive pre-employment, random and a for-cause drug and alcohol testing program, supported by the Office of Personnel Management's Employee Assistance Program.

(REFERRED TO BOARD OF TRUSTEES FOR ACTION)

### **Resolution 14: Mandated Insurance Coverage for Contraception Services**

(A-99)

Introduced by: Council on Public and Mental Health

Referred to: Reference Committee III

*Whereas, The United States among the industrialized nations has the highest rate of unintended pregnancies; and*

*Whereas, Fifty percent (50%) of all live births in Oklahoma result from pregnancies that are unintended and 11 percent of all live births result from pregnancies that are unwanted, both at rates higher than the nation; and*

*Whereas, The Healthy Oklahomans 2000 Sentinel Objective is to reduce unintended pregnancy to 30 percent; and*

*Whereas, Unintended pregnancies are associated with high risk pregnancies, low birth weight infants, birth defects, infant mortality, abortions, child abuse/neglect, domestic violence, crime, and dependence on social welfare and the high costs associated with these; and*

*Whereas, Available and affordable family planning/contraceptive services are effective in reducing unwanted and unintended pregnancies and some methods have up-front costs that are prohibitive to obtain without financial assistance; and*

*Whereas, In the absence of insurance coverage some women forego contraceptive use entirely and are many more times likely to conceive an unintended pregnancy; and*

*Whereas*, Traditional indemnity plans cover only eighteen percent (18%) of privately insured Americans for contraceptive services and of these only fifteen percent (15%) cover the leading five reversible prescription methods and fifty percent (50%) cover no leading method; and

*Whereas*, Only thirty-nine percent (39%) of Health Maintenance Organizations cover all five leading contraceptive methods and seven percent (7%) cover no method at all; and

*Whereas*, Ninety-seven percent (97%) of indemnity plans cover prescription drugs in general, and only thirty-three percent (33%) cover the costs of oral contraceptives, the most widely used contraceptive method in the United States; and

*Whereas*, The cost of just one unintended birth can be applied to prevention and contraception for ten women during their adult reproductive years a span of 25 years; and

*Whereas*, The nine-point action agenda of the *State of the State's Health Report 1999* includes "the prevention of unintended pregnancies especially unwanted pregnancies;" therefore be it

*Resolved*, That the Oklahoma State Medical Association support legislation mandating that any individual, group insurance or health benefit plan agreement, contract or policy, including the State and Education Employees Group Insurance Board, and any indemnity plan, not-for-profit hospital or medical service or indemnity contract, prepaid or managed care plan or provider arrangement or employer self-insured plan, except as exempt under federal ERISA provisions, shall provide contraceptive services for the subscriber or any dependent of the subscriber who is covered by the agreement, contract or policy, including all federally approved contraceptive methods.

(ADOPTED AS AMENDED)

### **Resolution 15: Federal Tax Legislation**

(A-99)

Introduced by: Oklahoma County Medical Society

Referred to: Reference Committee III

*Whereas*, Health insurance is purchased by employers; and

*Whereas*, Individuals have little voice in the selection of health insurance; and

*Whereas*, This causes discontinuities of longitudinal care as the selection and/or physician panels change annually; and

*Whereas*, Other dislocations are created by forced membership in managed care plans which may not be suitable for all members of a family or of an employee group; and

*Whereas*, Employer owned health insurance is conditioned solely by tax benefits peculiar to company owners; and

*Whereas*, Political leadership in Washington, DC, now perceives a budget surplus making tax reductions possible; and

*Whereas*, Tax reform has been advocated by many; therefore be it

*Resolved*, That the OSMA encourage the AMA to ~~That our AMA~~ actively advocate the development of Federal Tax legislation which would support encourage the independent purchase of health insurance by individuals and families.

(ADOPTED)

### **Resolution 16: Patient Choice in Medicare Reform**

(A-99)

Introduced by: OSMA-Organized Medical Staff Section

Referred to: Reference Committee III

*Whereas*, If Congress passes no Medicare reforms, the health plan for 38 million senior and disabled enrollees will go bankrupt by 2008 or consume 30 percent of the federal budget by 2025; and

*Whereas*, The National Bipartisan Commission on the Future of Medicare was appointed jointly by President Clinton and leaders of both parties in Congress and includes five senators, four representatives as well as several health industry experts; and

*Whereas*, The Co-Chairman of the Commission, Senator John Breaux (D-LA), has introduced a plan in which Medicare would allow seniors to shop for their own private market insurance modeled after the Federal Employee Health Benefit Program (Reforms long advocated by the conservative Heritage Foundation); and

*Whereas*, Offering such a wider array of private competition would lead to cost savings and eliminate (Depoliticize) the need for costly Medicare mandates that drive up premium costs; and

*Whereas*, These private plans would be required to offer a core set of benefits including hospitalization and catastrophic coverage, clearly state the services and cost of the services and not falsely advertise; and

*Whereas*, Premiums and benefits would be negotiated annually; therefore be it

*Resolved*, That the Oklahoma State Medical Association actively lobby the Congress of the United States for legislation providing Medicare beneficiaries with the option to purchase his/her own private market insurance; and be it further

*Resolved*, That this option will be based on the positive experience of the Federal

Employee Health Benefit Plan and that an independent "Benefits Board" be created with its membership selected by both the Administration and Congress which would specify the detailed benefits, subject to an up-or-down vote by Congress; and be it further

*Resolved*, That this resolution be submitted to the AMA-HOD at A-99.

(NOT ADOPTED)

### **Resolution 17: Continuing Medical Education (CME) Identification Method**

(A-99)

Introduced by: Tulsa County Medical Society

Referred to: Reference Committee III

*Whereas*, Using Social Security numbers to track CME credits raises some security concerns with respect to physicians; and

*Whereas*, There is increasing access to CME information with licensure boards, medical societies, insurance companies, employers and attorneys; and

*Whereas*, Considering the increased access to this information, there is increased risk that social security numbers may be used inappropriately and to the physicians' detriment; therefore be it

*Resolved*, That the Oklahoma State Medical Association discourage the use of social security numbers to track CME and encourage a different identification method.

(ADOPTED SUBSTITUTE RESOLUTION 18 IN LIEU OF)

### **Resolution 18: HCFA Assault**

(A-99)

Introduced by: Council on Medical Services

Referred to: Reference Committee III

*Whereas*, The current HCFA initiative to attack physicians as a group of fraudulent citizens represents nothing more or less than a vigilante assault on the practice of medicine; and

*Whereas*, Individuals are to be singled out with fear tactics; therefore be it

*Resolved*, That as a result of the current HCFA initiative on physician fraud and abuse activities, the OSMA, through PLICO or other appropriate means, should prepare to defend all accused physician members; and be it further

*Resolved*, That a database of questionable HCFA activities be maintained so that the OSMA can provide appropriate review.

ADOPTED

## **Substitute Resolution 18**

(A-99)

Introduced by:

Subject: AARP-HHS Assault

Referred to: Reference Committee III

*Resolved*, That as a result of the current AARP-HHS initiative on physician fraud and abuse activities, the OSMA should provide a response team to assist all accused physician members; and be it further

*Resolved*, That a database of questionable AARP-HHS activities be maintained so that the OSMA can provide appropriate review; and be it further

*Resolved*, That the OSMA send a resolution to the AMA commending the AMA on its attempt to combat the new AARP-HHS initiative to combat alleged health care fraud and abuse; and be it further

*Resolved*, That the OSMA call upon the AMA to use all possible legal remedies to abolish this new AARP-HHS initiative to combat alleged health care fraud and abuse.

(SUBSTITUTE RESOLUTION 19 ADOPTED)

## **Resolution 19: Uniform Credentials Verification Application Process**

(A-99)

Introduced by: Council on Medical Services

Referred to: Reference Committee III

*Whereas*, As a direct action of the OSMA Council on State Legislation and Regulation, HB 2578 was passed by the Oklahoma Legislature in 1998; and

*Whereas*, HB 2578 mandated that: "By January 1, 1999, the State Board of Health shall promulgate rules necessary to develop a uniform application which shall be used in the credentialing process of health care providers." (Sect. 1-106, 2 Title 63 HB 2578); and

*Whereas*, The State Department of Health has developed and published the requirements necessary for an acceptable uniform application process for credentialing of providers. (Chapter 2, Sub Chapter 15 procedures of the Oklahoma State Department of Health); and

*Whereas*, The Oklahoma Credentials Verification Organization complies with and satisfies these requirements and is utilized by numerous hospitals, outpatient clinics, ambulatory surgery centers and other health care organizations; therefore be it

~~*Resolved*, That the Oklahoma State Medical Association work to develop a State Department of Health rule or a legislative mandate that all physician creden-~~

~~tials verification organizations be approved by the Oklahoma State Board of Health and certified as being in compliance with the uniform application rules as promulgated by the Oklahoma State Board of Health.~~

*Resolved*, That the initial and reappointment credentialing forms utilized by the Oklahoma Centralized Verification Organization be submitted to the Oklahoma State Department of Health for review and acceptance as the prototype uniform applications.

(ADOPTED AS AMENDED)

## **Late Resolution 20: Folic Acid for the Prevention of Neural Tube Defects**

(A-99)

Introduced by: Edd Rhoades, MD

Referred to: Reference Committee II

*Whereas*, The prevention of neural tube defects (NTDs) is a national health objective for the year 2000, with the goal to decrease the rate of neural tube defects to 3 per 10,000 live births; and

*Whereas*, The three year average of NTDs in Oklahoma for 1994-1996 is 8.7 per 10,000 live births and 7.2 per 10,000 live births for 1995-1997; and

*Whereas*, The Public Health Service recommendation is that all women of childbearing age consume 0.4 milligrams of folic acid daily to prevent 50 to 70 percent of all NTDs; and

*Whereas*, More than half of all pregnancies in Oklahoma are unplanned and the Oklahoma State Department of Health recommends all childbearing age women obtain their folic acid from all three sources each day: a multivitamin that contains 0.4 milligrams of folic acid, foods high in folate, and foods fortified with folic acid; and

*Whereas*, Only 29 percent of women delivering a live birth in Oklahoma are taking a multivitamin daily one month before becoming pregnant; now therefore be it

*Resolved*, That the Oklahoma State Medical Association members ~~will~~ *are encouraged* to do the following to educate and inform their patients concerning the importance of obtaining adequate levels of folic acid to prevent NTDs:

- Write an order for each childbearing age woman to obtain over-the-counter multivitamins *with folic acid* and take one daily throughout their childbearing years, in addition to eating foods high in folate and fortified with folic acid.
- Give a one-year supply of multivitamins *with folic acid* as an engagement/wedding gift to encourage young women to make folic acid a habit.

- Provide each patient with written information concerning the importance of folic acid in preventing neural tube defects.

(ADOPTED SUBSTITUTE RESOLUTION 18 IN LIEU OF)

## **Late Resolution 21: AARP-HHS**

(A-99)

Introduced by: Melissa Clements, MD

Referred to: Reference Committee III

*Whereas*, the AMA has been very diligent and timely in its attempt to combat the new AARP-HHS initiative on alleged health care fraud and abuse; therefore, be it

*Resolved*, that the OSMA send a resolution to the AMA commending the AMA on its attempt to combat the new AARP-HHS initiative to combat alleged health care fraud and abuse, and be it further

*Resolved*, that in this same resolution the OSMA call upon the AMA to use all possible legal remedies to abolish this new AARP-HHS initiative to combat alleged health care fraud and abuse.

(ADOPTED AS AMENDED)

## **Late Resolution 22: Youth Suicide Task Force**

(A-99)

Introduced by: Rebecca Tisdal, MD

Referred to: Reference Committee III

*Whereas*, Latest national statistics for 1995 indicate that Oklahoma is tied for 10th place with a suicide rate of 15.3 for all ages; and

*Whereas*, A study of suicide in the 50 largest U.S. metropolitan areas ranks Oklahoma City in 8th place with a suicide rate of 14.8 for the three-year period from 1990 to 1992; and

*Whereas*, Suicide is the second and third leading cause of injury deaths among persons 15 to 64 years of age in Oklahoma (1990-1994). For 1995, suicide is the third leading cause of death claiming 512 lives, including 110 youth; and

*Whereas*, In the ten-year period from 1986-1995 there have been 883 youths under age 25 that died from suicide in Oklahoma; and

*Whereas*, Suicide is a complex and multifaceted biological, sociological, psychological and societal problem; and

*Whereas*, Many suicides are preventable if persons at risk of suicidal behavior can be identified and provided appropriate help; and

*Whereas*, Each suicide intimately affects at least six other people, including family members and friends of a loved one who died by suicide; and

*Whereas*, Suicide deaths impose a huge unrecognized and unmeasured economic

burden on the state of Oklahoma in terms of potential years of life lost, medical costs incurred and work time lost by mourners. A United States study showed each youth suicide resulted in an average loss of 53 years of life and \$432,000.00 of economic productivity; and

*Whereas,* The Oklahoma State Legislature is considering House Joint Resolution 1018 which will create the Youth Suicide Prevention Task Force. The purpose of this Task Force is to study the problem of youth suicide and develop a comprehensive state plan for reducing the suicide rate in Oklahoma. The Task Force will consist of representatives from state agencies, teachers, school counselors, PTA members, Native American community representatives, drug and alcohol treatment professionals, survivors of suicide (the family members of loved ones of someone who died by suicide), and suicide prevention organization representatives; now therefore be it

*Resolved,* That the Oklahoma State Medical Association participate in the development of a state plan to reduce the number of suicide deaths among the youth of Oklahoma; and be it further

*Resolved,* That members of the medical community actively participate and endorse the efforts of the Youth Suicide Prevention Task Force being considered by HJR 1018.

*Resolved,* That the OSMA encourage the Governor to appoint physician members of the Oklahoma State Medical Association to the Youth Suicide Prevention Task Force.



## Oklahoma Chosen for Pilot of Women & Girls, Tobacco & Lung Cancer Campaign

Representatives from the American College of Chest Physicians (ACCP) visited Oklahoma City recently to promote their organization's Task Force on Women & Girls, Tobacco & Lung Cancer. Oklahoma has been chosen to conduct the pilot project for the campaign. Shown here are (left to right) Marilyn Lederer, vice president and chief operating officer of the Chest Foundation, the ACCP's philanthropic branch; Mary Anne McCaffree, MD, OSMA immediate past president and state coordinator of the Women & Girls, Tobacco & Lung Cancer Project; D. Robert McCaffree, MD, vice chair of the Tobacco-Free Oklahoma Coalition and ACCP immediate past president; and ACCP vice president, Health and Science Policy, Sydney Parker, PhD.



## OCMS Holds Mini-Internship Program

The Oklahoma County Medical Society held its 14th Mini-Internship program May 24 and 25, 1999. The program was developed to offer insight into the daily work lives of physicians and has included attorneys, members of the news media, Congressmen, legislators, business executives, teachers, volunteer civic leaders and others. One of those participating in the most recent program was OSMA legal counsel Linda Scoggins, shown here with J. Chris Carey, MD, and fellow intern David Johnson, chief executive officer of General Surgeons of Oklahoma. OSMA Communications Director Brenda Hays also took part in the program, which has included more than 75 physician participants since the project was first begun in 1993.



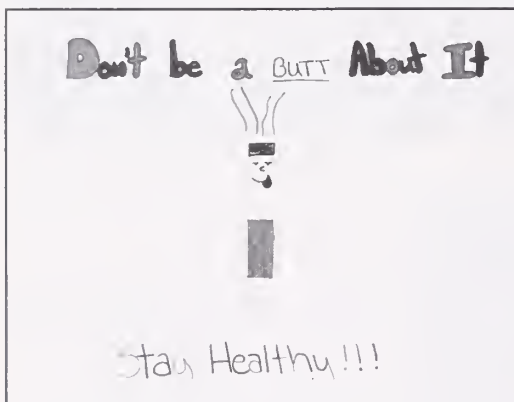
## OSMA Receives Disaster Relief

A number of donations to the OSMA's Disaster Relief Fund have been received in the wake of the May 3 tornadoes that devastated parts of central Oklahoma. OSMA Alliance President Cheryl Baker presented a check for \$1,000 from the Pennsylvania Medical Society Alliance's Emergency Assistance Fund to OSMA President Boyd Whitlock, MD, at the most recent Board of Trustees meeting.



## Former New York Yankee Receives Friend of Medicine Award

The Don J. Blair Friend of Medicine Award was presented to former New York Yankee baseball great Bobby Murcer (second from right) at a ceremony held recently at OSMA headquarters. Murcer was recognized for his outstanding work in curbing tobacco use among young people. Also on hand for the presentation were (from left) John Bozalis, MD, this year's recipient of the OSMA Community Service Award, Kay Murcer, and David Russell, MD, chairman of the OSMA Board of Trustees.



## Anti-Tobacco Contest Winner Selected

Oklahoma resident Mandy Ryan was selected as the state winner of the American Medical Association-Resident and Fellow Section's (AMA-RFS) second annual anti-tobacco contest entitled, "No, Ifs, Ands, or Butts—No Smoking!" The poster contest was designed to help combat teenage smoking, and was open to students across the country in grades six through eight. In conjunction with the contest, members of the AMA-RFS visited schools across the country, showing students first-hand the damaging effects of smoking on the body.

## Oklahomans Favor Spending Tobacco Settlement Funds on Prevention

An overwhelming majority of Oklahomans (90 percent) favor spending at least some of Oklahoma's tobacco settlement funds to prevent or reduce tobacco use among kids, and most (61 percent) think half or more of the funds Oklahoma receives from its lawsuit settlement should be used for this purpose, according to survey data released by the Tobacco-Free Oklahoma Coalition (TFOC).

Six hundred Oklahoma adults were interviewed on a variety of tobacco-related issues by

Mathematica Policy Research of Princeton, New Jersey, during January as part of TFOC's SmokeLess Oklahoma Project.

Individuals were given general information on the settlement, followed by questions about their degree of support for various alternative ways of spending the money. Finally, they were asked how much of it should be spent to reduce tobacco use among kids, considering all the different ways in which the settlement money could be used.

Of the respondents, 73.9 percent said they "strongly favor" spending at least a portion of the money from the tobacco settlement to prevent or reduce tobacco use among kids. When asked how much, 12.2 percent said all of the money, 17.8 percent said most of the money, 31.1 percent said about half of it, and 28.9 percent said a small portion of it.

The survey was conducted under a contract between Mathematica and The Robert Wood Johnson Foundation to pro-

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### Seeking Locum Tenens Coverage

Licensed in Oklahoma and wishing to relocate to practice general radiology. Contact L.R. Littleton, Jr., MD, 201 N. Sunset Dr., Winston-Salem, NC 27101.

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1200 sq. ft. furnished office space. West of Penn Square Mall on North Pennsylvania. Available NOW. Call 840-2369 or fax 840-1103.

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W.R. Holcomb, D.O.  
Susan Van Hook, P.A.-C.  
Nestor Pinaroc, M.D.

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D.L. Stehr, M.D.  
C.K. Su, M.D.

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C.K. Su, M.D.

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Pilar Escobar, M.D.  
J.E. Freed, M.D.  
E. Ron Orr, M.D.

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Alan J. Weedn, M.D.

### GYNECOLOGY

Nancy W. Dever, M.D.

### GENERAL & VASCULAR SURGERY

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Mohammad Jamshidi, D.O.  
Linda M. Johnson, M.D.  
John Hurd, P.A.-C.

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### ONCOLOGY (Part-time)

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R.G. Ganick, M.D.

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Oklahoma City

Integrus Southwest Medical Center -  
Oklahoma City

Jane Phillips Medical Center -  
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Mercy Health Center -  
Oklahoma City

Norman Regional Hospital -  
Norman

Orthopaedic & Reconstructive  
Research Foundation -  
Oklahoma City

St. Anthony Hospital -  
Oklahoma City

Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

Valley View Hospital  
Ada

#### Course offerings from OSMA Accredited Institutions

##### Deaconess Hospital - Cyndi Nelson - 405-604-4979

|           |                             |        |
|-----------|-----------------------------|--------|
| July 19th | Depression in Geriatric Age | 1 hour |
|-----------|-----------------------------|--------|

##### Mercy Health Center - Debbie Stanila - 405-752-3806

|          |                              |          |        |
|----------|------------------------------|----------|--------|
| July 1st | Positron Emission Tomography | 12:15 pm | 1 hour |
|----------|------------------------------|----------|--------|

|          |                             |          |        |
|----------|-----------------------------|----------|--------|
| July 8th | Treatment of Osteoarthritis | 12:15 pm | 1 hour |
|----------|-----------------------------|----------|--------|

|           |  |          |        |
|-----------|--|----------|--------|
| July 15th | Injury & the Advent of Cox-2 Specific Inhibitors | 12:15 pm | 1 hour |
|-----------|--|----------|--------|

|           |  |          |        |
|-----------|--|----------|--------|
| July 22nd | "What Every Woman Should Know About Erectile Dysfunction -A Gynecologist's View" | 12:15 pm | 1 hour |
|-----------|--|----------|--------|

|                 |             |  |        |
|-----------------|-------------|--|--------|
| July 7,14,21&28 | Tumor Board |  | 1 hour |
|-----------------|-------------|--|--------|

|           |                                       |         |        |
|-----------|---------------------------------------|---------|--------|
| July 20th | Neuroscience Institute Lecture Series | 7:00 am | 1 hour |
|-----------|---------------------------------------|---------|--------|

|           |                               |          |        |
|-----------|-------------------------------|----------|--------|
| July 29th | To Be Announced at Later Date | 12:15 pm | 1 hour |
|-----------|-------------------------------|----------|--------|

##### Orthopaedic & Reconstructive Research Foundation - Tara Vaughan - 405-631-2601

|           |  |  |        |
|-----------|--|--|--------|
| July 29th | Reflex Sympathetic Dystrophy Syndrome                |  | 1 hour |
|           | New Approaches to Early Office Diagnosis & Treatment |  |        |

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator at 405-843-9571*

## DEATHS



### **George L. Hill, MD 1952-1999**

George L. Hill, MD, died April 20, 1999. Born May 17, 1952, in Bartlesville, Dr. Hill received his medical degree from the University of Oklahoma College of Medicine, attending both the Oklahoma City and Tulsa campuses. He was a member of the American Medical Association, the Wisconsin Medical Society, and the Wisconsin College of Obstetrics and Gynecology, and a former member of the Oklahoma State Medical Association.



### **Jim M. Taylor, MD 1911-1999**

Jim M. Taylor, MD, died April 28, 1999. Dr. Taylor was born December 17, 1911, in Spencer. He attended the University of Michigan, receiving his medical degree in 1935. From July 1942, to January 1946, Dr. Taylor served active duty in the United States Army, including 26 months overseas during World War II, and held the rank of captain upon his separation from military service. Dr. Taylor had been a life member of the Oklahoma State Medical Association since 1980.



### **T. Jeff Williams, MD 1944-1999**

T. Jeff Williams, MD, died May 17, 1999. Born June 28, 1944 in Cordell, Dr. Williams attended the University of Oklahoma School of Medicine, receiving his degree in 1970. From July 1971, to July 1981, Dr. Williams served active military service with the United States Navy. He served on the Board of Directors of Southern Plains Medical Center in Chickasha and was a member of the Oklahoma State Medical Association.

## CLASSIFIEDS

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. **Payment must accompany all submissions.** Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 9th of the month prior to the month of issue (e.g., June 9 for the July issue).

### POSITIONS AVAILABLE

Hillcrest HealthCare System-Tulsa, Oklahoma, is actively recruiting for the following specialties: Hospitalist (Internal Medicine), Pediatric Intensivist, Anesthesiologist, Gastroenterologist and General Surgeon. To inquire, please call Lori Maisch at 800/997-0090 or fax C.V. to 918/579-2946.

## IN MEMORIAM

### 1998

|                                 |              |
|---------------------------------|--------------|
| Philip G. Tullius, MD .....     | July 4       |
| Louis H. Charney, MD .....      | July 8       |
| Ralph L. Walker, DO .....       | July 11      |
| Brook S. Bowles, MD .....       | July 20      |
| Edwin R. Shapard, MD .....      | July 28      |
| Paul L. Masters, MD .....       | August 6     |
| Douglas D. Leatherman, MD ..... | August 21    |
| Richard E. Carpenter, MD .....  | August 30    |
| Henry J. Freede, MD .....       | September 9  |
| Chester K. Mengel, MD .....     | September 14 |
| Leaford Thornbrough, MD .....   | September 27 |
| Alfred A. Hellams, MD .....     | October 4    |
| Sumner Y. Andelman, MD .....    | October 6    |
| Eric B. Meador, MD .....        | October 10   |
| Vance A. Bradford, MD .....     | October 23   |
| Joseph S. Raff, MD .....        | November 12  |
| Herbert J. Forrest, MD .....    | November 14  |
| Joseph N. Mitchell, MD .....    | December 23  |

### 1999

|                                |            |
|--------------------------------|------------|
| Thomas Edward Rhea, MD .....   | January 2  |
| H. Ben Yagol, MD .....         | January 19 |
| Fay Knickerbocker, MD .....    | February 6 |
| Ramon G. Blanco, MD .....      | March 5    |
| Neal A. Pickett, Jr., MD ..... | March 14   |
| Henry D. Wolfe, MD .....       | March 29   |
| Winfred L. Medcalf, MD .....   | April 1    |
| Robert P. Dennis, MD .....     | April 6    |
| Emil F. Stratton, MD .....     | April 7    |
| Carl W. Smith, Jr., MD .....   | April 8    |
| George L. Hill, MD .....       | April 20   |
| Jim M. Taylor, MD .....        | April 28   |
| T. Jeff Williams, MD .....     | May 17     |

### SEEKING STAFF PHYSICIAN

The Oklahoma State University Student Health Center is seeking a staff physician to provide a full range of primary medical care to students and other patients. The individual will perform primary level diagnosis and treatment, minor office procedures, office gynecological procedures. Participate in meetings and committees as assigned by Chief of Staff. May assist in training and supervision of medical and health professional students. The OSU Student Health Center, a comprehensive outpatient medical service, offers pharmacy, radiology, laboratory and mental health services. An allergy clinic, women's clinic and health education department are also a part of the health center. Minimum qualifications: graduate of an accredited school of medicine and 3-4 years experience in a medical practice is required. Current Oklahoma medical license and current state and federal narcotic license are required. Send letter of application and resume to Physician Search, 105 Student Health Center, 1202 W. Farm Road, Oklahoma State University, Stillwater, OK 74078 by June 25, 1999, or until position is filled. OSU IS AN AFFIRMATIVE ACTION/EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER COMMITTED TO MULTICULTURAL DIVERSITY.

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Warren V. Filley, MD\*° Richard T. Hatch, MD\*+  
Senior Consultants: Robert S. Ellis, MD\*° and Lyle W. Burroughs, MD\*+

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| Suite 204     | Suite 210        | Suite 115          | Suite 101    |

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|------------------------|-----------------------|-------------------------|
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| Charles F. Bethea, MD  | Fred E. Lybrond, MD   | Jerry L. Rhades, MD     |
| Mel Clark, MD          | Santash T. Prabhu, MD | Stephen M. Spielman, MD |
| William J. Fars, MD    | Alan R. Puls, MD      | Matt Wong, MD           |
| Terrance Khashtgir, MD |                       | Gary L. Worcester, MD   |

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*by Karen Mask  
OSMAA Vice President  
New Alliance Development*

I have received all these comments as the new Alliance Development Chairman. As new Alliances are developing throughout the state, I believe these comments serve well to remind us why an Alliance is such an important part of the medical community.

The Alliance can meet all these needs—and then some. This last year we have been in Grove, Altus and Elk City helping them develop new Alliances. We, as an organization, have many ideas for speakers, programs and health causes your alliance might like to take on in your community. We have even customized Alliance charters and developed different goals for the needs of the community.

All of us in the Alliance believe we are fulfilling a special need in Oklahoma. We have information to help counties focus on leadership, fundraising, health promotions, shelter projects and S.A.V.E. (Stop America's Violence Everywhere) projects. If you or at least four or five members are interested in developing an Alliance in your county, let us know. We would love to help you develop a group that is just like the other Alliances around Oklahoma.

We have made good friends, found a medical support group that is there in good times and bad, and we also manage to have lots of fun. Call me at 405/348-2667, if you are interested in starting an Alliance in your area.

# THE LAST WORD

## **Oklahoma City Physician Named Chair of University of Oklahoma Board of Regents**

Donald B. Halverstat, MD, was elected chairman of the University of Oklahoma Board of Regents earlier this spring. Dr. Halverstat had previously served on the board of the State Regents for Higher Education in Oklahoma City, serving as chairman from 1991 to 1993.

## **McAlester Physician Receives Special Recognition Award**

George M. Brown, MD, of McAlester, received the Special Recognition Award from the Federation of State Medical Boards during the association's annual meeting in St. Louis, April 24, 1999. The award was presented in recognition of Dr. Brown's contributions to the field of medical licensure, including his 14 years as a member of the State Board of Medical Licensure and Supervision.

## **Tulsa Physician to Serve as Team Physician**

Mark Troxler, DO, of Tulsa, has been selected to serve as Team Physician for the USA Track and Field Team during the World Youth Track & Field Championships, to be held July 16-18, 1999, in Bydgoszcz, Poland.

## **Years of Dedication to Practice of Medicine Recognized**

The Oklahoma County Medical Society recognized local physicians for their 50 years of dedication and service to patients and the medical community. Honored for their contributions were: Lawrence Stream, MD; Bill Reynolds, MD; Charles Reynolds, MD; Warren Felton, II, MD; Melvin Hicks, MD; Nancy Craig, MD; David Brown, MD; William S. Conkling, MD; Petre N. Grozea, MD; and H. Ruth Mershon. Each physician received an award of recognition from Governor Frank Keating for devotion and service to the practice of medicine.

## **US Department of Health and Human Services Offers Online Access to Information**

The US Department of Health and Human Services now offers information from US government agencies, major nonprofit and private health organizations, state health departments, and universities via a free web site designed to provide reliable, comprehensive access to health and medical information.

To reach the site, go online to [www.healthfinder.gov](http://www.healthfinder.gov).

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## Call for Photos

For those who enjoy photography, the *Journal* encourages the submission color photographs of Oklahoma scenes or native wildlife for consideration as cover photos.

## Call for News

In addition, the *Journal* welcomes general news items featuring medical trends which have an effect on the practice of medicine in Oklahoma. Announcements of an Oklahoma physician's role in a national organization or project are also invited.

## Submit Materials

Your submission of these types of materials will be much appreciated. The *Journal* team will be eager to be helpful in the processing of submissions. Address your envelope to:

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## The Rewards

The *Journal* offers a means for scientific information to be distributed to physicians in Oklahoma. The reward to the author may be not only in the form of public recognition if published, but the work may draw an award from the Oklahoma State Medical Association, with an announcement at the Annual Meeting.

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# JOURNAL

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Donald L. Cooper, MD, is chosen as one of Oklahoma's "Leaders in Medicine." Photo by Robert H. Taylor. Art direction by Transcript Press, Norman.





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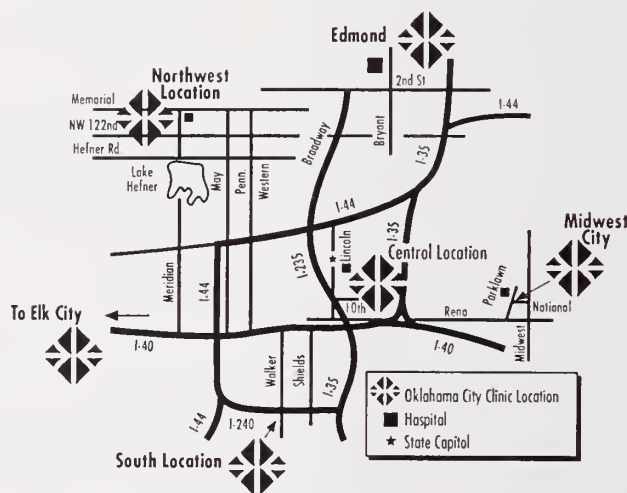
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## Doctoring by Union Rules

Count me out. You probably assumed that the recent decision by the American Medical Association's House of Delegates to develop a union for employed physicians would have passed by without notice. The "rank and file" physician would have supported the proposal without comment...welcoming this change in policy and focus with open arms, as it serves to protect employed physicians. You might have surmised that the AMA is finally opening up to some reasonable approaches and now we can see some fruits of that organization's longtime physician advocacy position.

Think again.

I don't know about you, but this move goes against the core of why I chose this profession. Webster has defined the word profession as "an occupation that involves a higher education or its equivalent, and mental rather than manual labor." Did I miss something? We are now going to unionize so that physicians can "fight fire with fire." This will allow for employed physicians to have a unified voice when dealing with managed care organizations.

Is this naïve, or did someone change the rules?

Where does this concept fall short? I believe it is short-sighted on several avenues. As a profession, we continue to fall back on a "Guild" mentality. Guilds were organizations that were formed in Europe by artisans and craftsmen for very idealistic and virtuous reasons, at least initially. They were formed to assure quality of the craft. They set up training requirements and duration of the service required before one would be allowed to practice their art or craft. Sounds quite appropriate; it maintains quality and ensures that there is an appropriate foundation to those skills.

The problem is that we are speaking about manual labor and the production of a building or piece of art. We are supposed to apply this model to the mental labor that is necessary in the realm of clinical care.

As with most human endeavors, the Guild movement became much less than its idealistic beginnings had envisioned. It was used as a tool to assure the economic status of its members and developed into a bureaucratic barrier over which new craftsmen could not pass. The result was a widening between the classes. A provision of maintaining the status quo. Is this really what we want for the profession of medicine?

As physicians, our incomes place us in the top 5 percent of incomes in this country. Now we want to form a union to protect that position. Couldn't we have something a bit more idealistic to motivate us?

I guess the cynic in me also sees the future of this mindset. There will be a completely new "medical industrial complex" for physicians. This move will stimulate the economy. A series of organizations will help with the local negotiations. There will be consultants who will assist in the set-up of these organi-

zations. Since the employed specialists will need one union and the primary care physicians will need another, this will then double the needs for organizational structure. And what about union halls—can we share those, or will we need two union halls? Who will we choose to direct these unions? Will the leadership speak with authority and we will follow? I might remind the more naïve among you about the fact that organizing physicians has been compared to "herding cats."

I am thinking that this move has a great future. I continue to wonder—what are the outcomes that can be measured? Or is that even important?

Am I getting too naïve in my old age? Am I too traditional? Does this decision smell of an obvious strategy to protect incomes of physicians? You know, it is important to keep these from slipping further. I am sure that the union will then have the ability to limit the number of clinicians that are credentialed to practice in certain localities. There will be the additional paperwork and bureaucracy to seek permission if changing the location of your practice from one office to another. There will be the new rules to learn about whether or not the union steward will allow one physician extender or two, and whether or not the procedure that you have done in the past is still appropriate.

Our identity as professionals seems to fly in the face of this move, toward a system that advocates for physicians on economic issues. It has finally happened. Medicine is no longer a profession; it is now a business relationship.

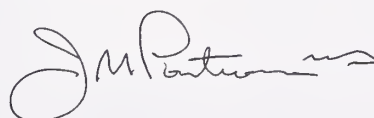
I sense we have taken a giant step here, without fully thinking through the implications. I do not want to be seen by my patients as a lowest-bidder primary care provider who has a contract renewal coming up for negotiation next week. Unionizing physicians puts one more distancing barrier between clinicians and their patients. Do we really need another intermediary in the formula?

My final concern is how is this organization going to have any strength? When contract negotiations do not go well, will there be a work slow-down, will there be a walk-out at midnight and picket lines to be manned?

I don't believe that I will participate in this movement. Yes, you can call me a scab.

**"Revolutions  
never go  
backwards."**

**Ralph  
Waldo  
Emerson**



J. Michael Pontious, MD  
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# PRESIDENT'S PAGE

## Is It Good Medicine?

As we live and learn and practice in the new world of government controls, managed care and decreasing incomes, we must not forget the rules which we pledged to follow in all of our decision making. Our code of medical ethics is truly unique among the professions.

Dr. Nancy Dickey, AMA immediate past president, has often discussed the importance of continually striving to maintain our ethical standards. Our AMA Council on Ethical and Judicial Affairs (CEJA) has recently been asked to consider many ethical situations and to give an opinion regarding our obligations in these areas. I will mention a few examples:



1. "Dolly," a sheep, was cloned in Scotland in 1997. This has generated much interest and concern about the possibilities of human cloning. This is a very complicated area and much work is being done in areas of legislation, research, and medical ethics. It is the opinion of the Council on Ethical and Judicial Affairs that before physicians even consider participating in human cloning, the harms and benefits need to be further evaluated with many issues requiring discussion on a societal level.

2. The many areas of genetic testing are going to be very important to us in the future in helping us to diagnose, predict, and prevent illnesses. Much of this, however, is still quite preliminary, and much research is yet to be done. We must educate ourselves and our patients about the advisability of such testing. We must be sure that the results of such testing are not used by insurance companies to make decisions about who to and who not to cover. Our Oklahoma State Legislature recently passed the "Genetic Research Studies Non-Disclosure Act," which keeps confidential all research records of individual subjects in genetics research studies. Much work remains to be done in this area concerning research, education, and legislation.

3. What are the physicians' ethical and legal obligations with respect to reporting drivers who are physically or mentally impaired? Most states

have policies for identifying drivers with impairments. Some are mandatory, but some leave the decision to report to the discretion of the doctor. The latter, then, brings up questions of confidentiality and physicians' liability. The problem of impaired drivers illustrates the fundamental conflict between the responsibility physicians have to society and their responsibility to individual patients. In the CEJA report entitled "Impaired Drivers and their Physicians," it is recommended that the physicians assess the patient's impairment, discuss this with the family, and recommend restrictions in, or complete cessation of, driving when necessary. The physician should report those cases where continued driving is unsafe and the patient and family ignore the physician's advice. The physician should explain his obligation to the patient and family.

4. Our AMA Ethics Committee also studied the "sale of health-related products" from physicians' offices. Their conclusion was that in-office sale of health-related products by physicians presents a financial conflict of interest, risks placing undue pressure on the patient, and threatens to erode patient trust and the primary obligation of physicians to serve the interests of their patients before their own. They recommended that: (a) products should not be sold where benefits claimed lack scientific validity; (b) products should be distributed free or at cost; (c) physicians should not engage in exclusive distributorship of health-related products.

These are but a few examples of the many, many questions that will challenge us in today's practice of medicine. There will be differences of opinions. We must remember to always ask the questions, "Is it good medicine? Does it follow the ethical principles under which we were all trained?" Our OSMA Committee on Medical Ethics & Competency will be meeting soon to discuss these and other ethical problems.



Boyd O. Whitlock, MD  
OSMA President

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"We must remember to always ask the questions, 'Is it good medicine? Does it follow the ethical principles under which we were all trained?'"

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## Have We Forgotten So Soon? Loyalty, What Is That?

by M. Joe Crosthwait, MD

In light of what is currently happening in the medical liability insurance arena, I feel compelled to remind our colleagues of the history of medical liability insurance in Oklahoma.

I write this article because I was chairman of the Board of Trustees from 1972 through 1974 and president of the Oklahoma State Medical Association in 1987-88. I have been intimately involved in the trials and tribulations of the physicians of Oklahoma in attempting to secure and keep quality medical liability insurance at an affordable premium. As a part of the OSMA delegation to the AMA House of Delegates for 22 years, I have had frequent opportunities to visit with physicians from other states. They have not been as fortunate as we when it comes to quality medical liability plans. They are envious of us.

The current business process in professional liability insurance is not new to the physicians of Oklahoma. Most of the physicians over 50 years of age will well remember our struggle to maintain medical liability insurance at an affordable premium in the 1970s.

The physicians, wanting to have the lowest cost possible for their liability insurance, succumbed to low rates. Medical liability companies came into Oklahoma with a "low-ball" premium. This would displace the policy then in place. However, after one or two years, the new company would increase the premium as much as they wished, sometimes as much as 50 percent. We were captive. We had no choice. We paid the new rates or we did not have liability insurance.

This occurred during the so-called "medical malpractice crisis" years, 1974-79. We had St. Paul, INA did it to St. Paul, CNA did it to INA and finally Hartford did it to CNA. All of these companies were very large companies with deep pockets.

Hartford came in with a low-ball premium and stayed until CNA left. Finally, in mid-1979, Hartford notified the State Medical Association of an impending 50 percent increase in premiums effective January 1, 1980. There was to be no negotiation. Oklahoma's loss experience was being compared to the rest of the country and we were being rated on that basis. Oklahoma's loss experience was very good compared to the rest of the country. Actually, the increase in premium was more than the total loss for the previous year.

Finally, in the fall of 1979, the officers and Board of Trustees said that we would not continue to be at the mercy of a company domiciled outside the state of Oklahoma.

The officers and trustees of the Oklahoma State Medical Association consulted C.L. Frates and Company, who had represented the Oklahoma State Medical Association in obtaining medical liability insurance for the physicians of Oklahoma. After several meetings, and Mr. Frates' trip to London to obtain adequate reinsurance, the plans for an Oklahoma State Medical Association Professional Liability Insurance Company began to formulate.

On January 1, 1980, the Physicians Liability Insurance Company of Oklahoma (PLICO), a non-profit medical liability insurance company, was born. A temporary board of directors was appointed, to be elected at the OSMA Annual Meeting in May 1980.

During the past 19 years the physicians of Oklahoma have enjoyed autonomy for their captive insurance company, the Physicians Liability Insurance Company of Oklahoma. The Board of Directors is elected by the physicians of Oklahoma; the Board is responsible and responsive to the Oklahoma State Medical Association and the association's Board of Trustees.

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"The Board of Directors is elected by the physicians of Oklahoma; the Board is responsible and responsive to the Oklahoma State Medical Association and the association's Board of Trustees."

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We have enjoyed one of the lowest premium structures in the country. PLICO has continued to grow with capital, surplus and reserves of more than \$137 million. We as physicians have immediate access to the people making the decisions and running PLICO.

Our company, Physicians Liability Insurance Company of Oklahoma, and the physicians of Oklahoma are again being threatened with the loss of our autonomy and excellent medical liability insurance we have enjoyed for the past 19 years.

Another company has appeared on the scene, offering lower rates than PLICO. Our own University of Oklahoma Health Sciences Center (OUHSC), an institution most of the physicians of Oklahoma have supported philosophically and financially over the years, has succumbed to the "carrot" of lower premiums without understanding what will most likely happen in the future. The amount of premium difference between the other company and PLICO is not significant considering the budget of OUHSC. This makes one wonder about loyalty, but that is another story for another time. Most insurance people say that these lower rates are not sustainable and are only presented to "buy the business." I wonder how responsive they will be when the physicians wish to have a say in their own destiny. Will they be able to have direct and immediate access to the management company and the persons handling their claim? These are issues we must think about.

If we have learned anything from history, we know that as soon as they have bought as much business as they can and are no longer making a profit, their rates will increase. Their stockholders will demand no less.

I urge each of you to think of your loyalty to PLICO—the one thing that has made it possible for you to have the low premiums you have had over the last 19 years. If you are employed by an entity that is only looking at the bottom line, urge them to think about what will almost assuredly happen in the near future. PLICO has saved the physicians of Oklahoma an estimated \$400 million. Contrary to the rumor mongering, it is a growing company with the financial integrity to stay the course.

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"I wonder how responsive they will be when the physicians wish to have a say in their own destiny. Will they be able to have direct and immediate access to the management company and the persons handling the claim? These are issues we must think about."

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# LEADERS IN MEDICINE




**Donald L. Cooper, MD**



Story by Richard Green

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 While qualifying in his semi-final heat of the 200-meter dash, American sprinter Tommie Smith felt his right adductor muscle tighten going around the curve. By the time he had limped to a stop, a rush of fear subsumed the pain from the muscle pull. He was well aware that the 200-meter final of the 1968 Mexico City Olympics would be held in two hours and that four years of training for that single 20-second event were on the line.

To say Smith was anxious and scared would be putting it mildly. Coming off the track, he was met by team physician Don Cooper, who looked Smith in the eye and said, "We are going to treat this [muscle pull] aggressively," and rattled off as authoritatively as possible just how he was going to do it. Aspirin. Ice. Intervals of massage and walking. Barely two hours later, Tommie Smith, his leg muscle wrapped, knelt in the starting block.

Earlier in the 19th Olympiad, Dr. Cooper had faced a similar challenge when high-jump hopeful Dick Fosbury told him on the morning of the high-jump final that the pain and stiffness in his lower back prevented him from bending over to tie his shoelaces. No time for equivocating or temporizing, Cooper, 41, resolutely laid out the treatment plan and set to work on the man who popularized a new style of backwards high-jumping called "the Fosbury Flop."

He applied a steam pack to Fosbury's lower back, then massaged the affected area. But Cooper's piece d'resistance was a manipulation technique he had learned when he was a 15-year-old high school student from a chiropractor named Doc Holliday. Applying what he called "hip rolling" manipulation, Cooper got what he wanted when he heard Fosbury's back go "snap, crackle, pop."

In just 10 years as a team physician and practitioner of the emerging specialty of sports medicine, Cooper was at the pinnacle of his profession. He had first submitted an application to be an American Olympic team physician in 1963 for the 1964 Tokyo games, but had not been selected. Disappointed but not deterred, he was determined to improve his chances for the 1968 Games. When he was selected from a large pool of applicants for one of four positions, Cooper felt like he had won an Oscar.

So here he was in Mexico City, practically working non-stop—four physicians weren't nearly enough. (The 1996 American team in Atlanta had 30 physicians.) Cooper was swamped, with little time to sleep let alone bask in the glory of his exalted and coveted position.

Emergencies cropped up, like Tommie Smith and Dick Fosbury. Having been a trainer since age 15 and a team doctor for a decade, Cooper realized he wasn't a miracle worker. But as he looked at the stricken faces of these Olympic athletes, he felt like his "butt was on the line."

He had had similar feelings 11 years before during his first practice in Manhattan, Kansas. Upon his arrival, he was almost immediately overwhelmed with patients and exhausted by too many 12- to 16-hour workdays. Worse still, his partner had a contract with a nursing home and "taking care of those old folks was not rewarding. Seemed like they all had problems I couldn't solve. I dreaded going out there every Wednesday. An assignment in hell."

According to the contract with his partner, Cooper couldn't establish his own practice within 30 miles of Manhattan, yet he and his wife, Dona, had bought their first home where they were raising two children. He felt trapped. His butt was on the line. When the stress got to be too great, Cooper says he handled it "by going nuts," winding up in the psych ward of a VA hospital, flailing away at a big punching bag until both hands were bloody.

No one who had ever known the loquacious, bright, funny Donnie Lee Cooper would have recognized the man in the hospital. But anyone who understands that comedians are often masking their own pain and insecurity would not have been surprised. "Going nuts" is Cooper's glib, humorous way to explain what landed him in the psych ward, but there is considerably more to the story than that.



Like most other citizens of American prairie towns in the 1920s, Donald Lee Cooper was born at home. To be exact, he arrived on August 11, 1928, at 413 S. Pennsylvania, Columbus, Kansas—in the extreme southeastern part of the state. His parents, Calvin and Pearl Cooper, expected a girl, whom they would name Grace Virginia. They were so unprepared for a boy that no one could recall years later where the name Donald Lee had come from. Frankly, Calvin and Pearl, at 45 and 38 years of age, respectively, had been totally unprepared for any more children, period. With two boys and a girl, ranging from 8 to 14, they had good reason to believe that their family was complete. Moreover, after her third child's birth, Pearl contracted tuberculosis and nearly died. In accordance with the usual prescription of prolonged bedrest, she took to bed for two years. Later, when she first noticed the signs of the pregnancy, she thought it was menopause.

The house Don was born in still stands today. It was designed by his father, a general practice civil engineer who was born and raised a Quaker. While Calvin might have quaked at the word of the Lord, he was otherwise highly disciplined, self-assured, indefatigable, and perfectionistic. "Growing up, I never remember asking my father a question he couldn't answer," Don says. "I also can't recall him ever playing with me the way the other fathers played with their children." These two statements are characteristic of Don's ambivalence toward his father.

On one hand, he characterizes his father as scholarly and emotionally remote, a man who never spared the rod and recorded every expenditure, no matter how small or trivial, in a ledger. "He scared me to death. When he said, jump, you just asked how high."

On the other, he says his father gave him a horse when he was 6, a .22 when he was 12, and taught him how to skin and dress the squirrels he shot out of the trees. He introduced his son to the joy of reading; Calvin loved books so much that he opened a bookstore, ensconcing Pearl inside as the bookseller while he did his day job as the city civil engineer in their new hometown of nearby Pittsburg, Kansas. Calvin also played classical music records on a Victrola, and later enjoyed sitting down with the family to listen to comedians Jack Benny and Fred Allen on the radio.

But Calvin's perfectionism was a legacy to his son. Though Don admits now that perhaps

this was more his perception than his father's expectation, it was a palpable force—as an enduring and unbearable load in his early years of his medical practice.

If hard work is good for body and soul, Don must have been in great shape. When he was quite young, he worked in the family's one-acre vegetable garden; then he was a curb-hop at a grocery store, a delivery boy on a \$13 bike he bought himself, a soda jerk, a stocker and sacker at Safeway and a surveyor working for his father.

At age 4, he made up his mind he would be a doctor following an incident involving a neighbor. "An old man who lived across the street broke his leg," Cooper recalls. "I saw Doc headed that way, so I followed him. He let me watch while he set that old man's leg on his kitchen table. Then he made a cast from gauze and plaster of Paris. Man, I thought, what a deal. And from then on, I never wanted to be anything else."

The only doctor in the family, according to the genealogical trailblazing of Don's brother, was one Elijah Perkins, a member of London's Royal College of Surgeons. Unfortunately, he was excommunicated from the prestigious college after inventing and popularizing "Perkins tractors," small magnets that he would draw across any afflicted area of the body. Once in a medical program, Cooper heard a speaker call his ancestor "America's first recognized quack." But Cooper points out that Perkins once treated George Washington and that while the "tractors" may not have been therapeutic to the father of his country, they were at least benign unlike the conventional practitioners, the bleeders.

While Don wanted to be a doctor in good time, he wanted to be a star athlete immediately. The trouble was he was "too small, slow, uncoordinated and somewhat cowardly." He was good at baseball until pitchers started throwing curve balls; he played basketball, when the school team was more than 20 points behind or ahead. When Don was 13, he went out for football. But at five-one by 105 pounds, he wound up as the waterboy, in charge of one bucket and one ladle.

Not only did his diminutive stature work against him in team sports, but it also made Don the butt of jokes and pranks. Every so often, some of the football players would literally hang the kicking, wriggling, Donnie Lee up on one of the coat pegs that lined the hallways at school. His legs dangling above the floor, he could not free himself without help, usually from a teacher.

Though such treatment was mortifying, he had a natural antidote, humor. Donnie Lee was smaller and younger than his classmates were, but he was razor sharp, quick-witted, and had a clear and penetrating voice. In the hallway hubbub between classes, his voice could always be distinguished. By telling jokes and funny stories in a lexicon that included liberal use of profanity, he could often make his classmates laugh with him instead of at him. Plus, as improbable as it seems, being the waterboy was his niche, for it was the first step toward the career goal that he had brought into sharper focus when he was 6. Listening to the late, great Harry Carey do the Cardinal games on radio, Donnie Lee decided he would become the team physician.

At 14, he got his first big break. Chuck and Frank Kramer, the originators of an analgesic balm that they sold out of the trunk of their car, noticed Don working in the school's equipment room and offered him the chance to be a trainer. They sent him literature and gave him a subscription to *Trainer Aid* magazine, all of which he pored over religiously. He also got tips and pointers here and there, the most valuable of which were the various manipulations demonstrated by Doc Holliday, the town chiropractor.

Don soon became the Pittsburg (Kansas) High School team trainer, henceforth known as "Doc." He accompanied the teams to every game, riding in the school bus with the football squad. For basketball, running the bus was deemed too expensive for only 10 players, so the parents pooled their gas coupons and the team was driven to every away game in a Buick and a Hudson. Since there was no room for the trainer in the cars, he and the equipment were stashed in the trunks. Doc also kept score and phoned in the story to the *Pittsburg Sun*. When he wasn't keeping score, he "helped" the refs officiate from his vantage point on the sidelines, a practice he maintained throughout his long career. (Just last year during one OSU game, Coach Eddie Sutton was warned by an official to "shut that Cooper up" or he would call a technical foul.)

Though Doc wasn't on the teams, he wanted to belong, and that meant running around with team members, and that meant drinking, and that meant many short hops from the "dry" state of Kansas to the "wet" state of Missouri. Pearl knew that Donnie Lee was drinking, but she hid this fact from Calvin, who rarely looked up from his engineering projects and his books. He promised his mother that he would cut down or stop, but after his high school graduation in

1946, he enrolled at the Kansas State College in Pittsburg (now Pittsburg State University) and he says his drinking went from bad to worse.

As team trainer at the college in 1946, he was 17 years old and still trying to fit in with the athletes. But these guys were in their mid-20s, and veterans of World War II. "Until recently, about 95 percent of them had been killing Germans and Japanese and they were the meanest bunch of football players I had ever been around," Cooper says. "I was a baby compared to them. The only way I could stay up was to match them drink for drink. I was only five-seven and 140 pounds, but I could keep up."

It's difficult to assess the severity of Cooper's drinking problem. He says all he did in college was drink and chase girls. He also reports that he drank until he blacked out several times. Yet, he graduated in three years (in 1949), had a 3.8 grade point average and was president of the senior class. In any event, his hard drinking was halted after he began dating college classmate, Dona Maddux. According to Doc, Dona was "part-Cherokee with long raven-colored hair, tiny, cute, vivacious—and Carrie Nation on the hoof."

First date: January 9, 1948. (Don wore a bandage on his nose to conceal a pimple.) Engagement: May 6, 1948. Wedding: June 4, 1950. Don says they didn't have enough money to get married sooner. Between their engagement and wedding, Don graduated from college and entered the University of Kansas Medical School. After the Coopers' wedding, Dona taught school until she became pregnant and was laid off in accordance with the regulations of the school system. She then taught private elocution lessons. Their first son, Donald L. Cooper Jr., nicknamed Chip, was born in 1951.

Cooper made good grades in college, he says, by "cramming, being a bullshit artist, and by charming and amusing" his professors. In medical school, however, he found the tried and true to be somewhat ineffective. Fortunately, he had a classmate, Charlie Replogle, who taught him how to study and kept his feet to the fire. As a result of that help and encouragement during the basic science courses in Lawrence, Don made Alpha Omega Alpha (a medical honorary society) and finished fourth out of 104 students in the class of 1953.

Following his internship in Kansas City, he joined the Air Force to fulfill his military obligation. He served from 1954-56 at Kirtland Air Base in Albuquerque. By this time, he and Dona had two more children, Cathy and Cheryl. Tad would be their last child. Of those Air Force

years, he recalls that the basketball team he was on easily won the base championship; that he sewed on the severed tip of an airman's index finger which took—constituting a good omen for him a decade later on a famous amputation case at OSU; that he got drunk for the last time following a long, boozy evening with two fellow captains during which Cooper says they “christened the new officer's club swimming pool by pissing in it.” After that evening, he swore to Dona, who almost left him that night, that he would never have more than one drink a day and that alcohol would never be consumed in their home, a promise he has honored to this day.

Just before he was discharged, Cooper visited Purdue University to interview for a vacancy on its student health service staff and to be the university's athletic physician, just the position he had long dreamed about. “When I got back to Albuquerque and told my Air Force doctor buddies about the job, one of them said, ‘You dumb shit. There's no money in that. You can make a 100 g's easy in private practice.’” The other five of his colleagues in the room concurred.

Cooper was persuaded. The family returned to Kansas and in 1956 he landed a practice in Manhattan, not at Kansas State University, but in private practice with a 71-year-old physician (his father's age) who said he was “verging on retirement.” What had initially seemed a Godsend to Cooper soon degenerated into a nightmare. The two men contractually agreed to split their fees 50-50. That was fine except that Cooper was doing almost all of the doctoring, which subsidized his partner's real interest—playing the stock market. What a deal! The old man kept postponing his retirement. In a macabre way, Cooper thought this arrangement was at least beneficial to the patients, for he had come to believe that his partner hadn't read a medical book or article in 50 years.

But before this realization had sunk in, he and Dona—after years of living hand-to-mouth in tiny apartments—had bought a house and started partaking of the 1950s prosperity. Unfortunately, Don was never around to enjoy their new lifestyle. He was running the town's two emergency rooms, serving as team physician at the senior and junior high schools, making house calls and rounds, doing anesthesiology, surgery, delivering babies, and treating the chronically and terminally ill at a nursing home.

You would think he would have trouble staying awake. But after several months, his problem was the opposite: severe, intractable insomnia. Doubt invaded his judgment and a darkness

seemed to settle over him. Forcing himself to get through the routine of a day, he recalled his mother's similar suffering in 1941-42 when he was 13. Finally, when she could no longer get out of bed, she was diagnosed with “involuntional melancholia,” the old term for what he now recognized in himself: a major depression. His mother had lived with her sister for about three months, until the depression subsided. What could he do? He had to earn a living. Realizing the serious nature of his illness, Cooper got an appointment with a psychologist at the Menninger Clinic.

After a few weeks of talk therapy (anti-depressants still being in the future), he felt no better. Then one day as he was driving home after an appointment, he saw an 18-wheeler approaching and thought he could end his unrelenting pain in an instant. Not wanting to take the truck driver with him, he would turn into the truck after the cab had passed. He started to cut the wheel, changed his mind, jerked back and lost control of the car, careening into a bar ditch. The next day at the VA hospital in Topeka, he was put into maximum security, and issued a green hospital suit and some very short shoelaces. The first few weeks were pure torture; as part of his therapy, he painted a self-portrait, a man draped with a black tarp unable to see anything except hopelessness.



Three months later, he was discharged. It is likely that some combination of time and the various therapies of the day had vanquished the depression. A short time later in 1957, Kansas State University in Manhattan offered him a job, staff physician at the student health center, which enabled him to practice in town without violating the contract with his partner, which prohibited him from establishing a practice within the city. Cooper also happily agreed to become the university's athletic team physician, at no additional compensation. He started at a good time. The university was building a brand new state-of-the-art student health center and after another physician resigned, Cooper was named assistant director. Within a few years, he would doubtless be director. Meanwhile, he was so talkative, funny, quotable, knowledgeable, bright and innovative that he was becoming well known around the Big 7 Conference.

In 1959, when Oklahoma A&M's basketball team came to town, (which by then was in the Big 8) Cooper met Coach Henry P. Iba and remembered being “terrifically impressed.” Mr.



**The Coopers examine one of the many irons in their antique collection. They have irons from all over the world... just one of the hobbies they share.**

Iba must have been impressed with Cooper, too, because he told Don that the director of the student health service would soon be retiring and encouraged him to apply. Don said he would look into it. As a true competitor, Don recalls one other thing about that meeting: "We [K-State] kicked their ass." Cooper still kids a player on the losing side of the game, Eddie Sutton, now OSU's coach.

A&M contacted Cooper. They arranged an interview and A&M offered him the job as director of the student health clinic and team physician. He said he would think it over. Then, he weighed the pros and cons with Dona. KSU had a brand new building and he was guaranteed to be in charge within two years. Furthermore, the KSU president said that he would beat any offer from A&M. A&M's student health service was old, dark and gloomy; the money was kept in a cigar box. He called A&M back and said no thanks.

Then he left for a post-graduate course in psychiatry being offered in Kansas City. Since his stay in the psych ward, Cooper had become very interested in psychiatry, and was still flirting with the idea of doing a psychiatry residency. The presenter was Dr. Jolyan West, head of psychiatry at the University of Oklahoma Medical Center in Oklahoma City. During a break, they met and talked. Somehow, the offer from A&M came up and West chided Cooper for failing to accept the challenge to build a first-class student health center at A&M. "How old are you, Cooper?" asked West. Told he was 31, West said, "So you will be content to sit in a rocking chair at K-State in a place somebody else built?"

When Cooper arrived home late that night, he woke up Dona and said, "Honey, I think I've made a big mistake."



The Coopers moved into their new home in Stillwater on June 4, 1960, Don and Dona's 10th wedding anniversary. Don and Dona still live in that same house, though their four children have long scattered to make their own lives. To Doc Cooper, as he has been known ever since in Stillwater, around Oklahoma, and by his many admiring colleagues across the nation, the ensuing 39 years have rushed by at a seemingly accelerating rate. But that phenomenon has done nothing to impair his memory.

It seems to him like only yesterday that he began his job as director of OSU's Student Health Center with a promise from the president to renovate its building, constructed in 1927. Cooper spent more than \$60,000 for remodeling, painting, constructing a new ER, and a cash register to replace the cigar box. "I did pretty much what I wanted because my supervisor, President [Oliver] Wilhelm, didn't really want to be bothered."

Still, the old building was cramped and inadequate to meet the needs of the rapidly growing university community. When Wilhelm retired and Dr. Robert Kamm succeeded him in 1966, Cooper started lobbying for a new building. "My feeling," Kamm recalls, "was the money should go where people have made the best case for it, and Don did that persistently and fairly."

Almost a decade later, Kamm gave Cooper the go-ahead and he designed a new building that would allow his staff to provide among the most comprehensive services available for some of the lowest fees in the nation. Furthermore, Cooper's department generated a surplus that eventually amounted to \$500,000.

While he was developing a first-class health center, Cooper was also pioneering and promoting sports medicine. He had combined years of experience as a sports trainer with his medical education and training to offer OSU athletes an expertise and service not previously available. He was their doctor and their advocate. The idea of injecting a badly or possibly badly injured athlete with a pain killer for a short-term goal was anathema to Cooper. He was one of the first to advocate the use of exterior-padded football helmets (at least at football practices) and the requirement that football players wear mouthpieces.

But if he were a crusader, he brought his own unique persona to the public's attention. He was not only knowledgeable, but also quotable, and the sports writers and other journalists also loved his sense of humor and burgeoning repertoire of jokes. He had so many after awhile that he started carrying around a small appointment book, which he partially filled with handwritten punch lines. Sample: "What is the ideal weight of a lawyer? Eight pounds, and that includes the urn."

Still, there was no question that he took his jobs seriously, says Dr. Kamm. "His off-color stories and profane jokes underscored the fact that he never took himself seriously." Former OSU wrestling coach and athletic director Myron Roderick agrees: Doc Cooper's "personality is his great strength; he relates well to everyone and there's not a phony bone in his body."

Though he was director of the health center, Cooper saw patients every day, and often at night following bar fights and other youthful escapades. As opposed to his Manhattan private practice, where he held the hands of many dying people, Cooper loved treating patients who virtually always got better; he could only think of two students who died on campus during his 30 years at the health center.

Two other tragedies, however, stand out in his mind. "At a free-style wrestling tournament in April 1970, I was at the scorer's table when Ray Murphy, struggling to wriggle out of a bearhug, suddenly struck the mat with his forehead. He had been propelled downward with the full force of his own weight and his opponent's and there was a loud crack upon impact." Cooper was at Murphy's side in two seconds. Looking up at Cooper Murphy said: "Doc, I've been cut off."

"Yes, Ray, I know," said Cooper, who put Murphy in traction and rode with him in the ambulance to Oklahoma City. Murphy had fractured either a C3 or C4 and has been a total quadriplegic and on a respirator ever since. He has been Don and Dona's friend ever since, too. On or about the 20th of each month, Dona writes Ray Murphy a letter, filled with news and views. She has been writing Ray like that every month for 29 years! Such kindness surely aided his determination to live as independently as possible. He gets around in a sip and puff wheelchair and runs a business as a computer programmer.

The other tragedy occurred in 1964. Bob Swaffar, a 6-8 starting center on the Cowboy basketball team, was washing clothes in the dorm. He reached into a dryer, called a water extractor, to get his jeans. Part of the jeans wrapped around



**Dr. Cooper, Jesse Owens and former OSU President Kamm—Dr. Cooper treated Jesse Owens during the final years of Owens' life.**

his hand and part stayed tangled in the extractor, which was spinning at 2,500 r.p.m.s. The centrifugal force wrenched Bob's right arm off midway between the elbow and shoulder. It fell into the extractor and was spun dry before the machine could be disconnected.

After Cooper was notified about 10:30 p.m., he called local surgeon Bob Roberts who told him that his son, Lynn, was on Dr. Rainy Williams reimplantation research team at the OU Medical Center. "I called Rainy," Cooper recalls, "and said I've got a good candidate for your first reimplantation. He said he would assemble the team and be waiting at University Hospital. Doc Cooper accompanied Swaffar, who never lost consciousness, to Oklahoma City, holding Bob's left hand in his and talking about the possible surgery and God knows what else. But one thing Doc Cooper can always do is talk. Bob's right arm was submerged in a big tub of ice also in the back of the Cadillac hearse, flying along Highway 177 (I-35 hadn't been built yet) at 100 miles per hour. Swaffar was wheeled into the O.R. at 12:30 a.m. and by 7 a.m. his arm had been reattached. It is still there.



By the mid-1960s, Cooper was already well known beyond the Big 8 and in sports medicine circles nationally. In 1968, his medical prominence attracted international attention following his work as a team physician with the U.S. Olympic Team. At an elevation of more than 7,300 feet, the Mexico City Olympics were the highest ever held and one of the most controversial.



**Author James Michener poses for a photo with Dr. Cooper.**

The year 1968 had been one of the most tumultuous not only in American history but in many other countries including Mexico. Twelve days before the Olympics began, 30 university students in Mexico City were killed by army troops when a campus protest turned violent. To protest racial injustice in America, the U.S. team's black athletes threatened to boycott the Games, an action that was averted just before the Games began on October 12. As a result, the two U.S. favorites in the 200-meter run—Tommie Smith and John Carlos—were able to compete. That Smith won the gold was in part due to Cooper's successful treatment of Smith's pulled muscle that he had sustained during the semi-final. So, in a sense, Cooper contributed to one of the most famous, or infamous, moments in modern Olympic history. When the Star Spangled Banner was played to honor Smith, the American gold medalist, he and Carlos, the bronze medalist, stood on the winner's platform with heads bowed, extending a black-gloved Black Power salute. The U.S. Olympic Committee immediately threw them off the team.

Without Cooper's ministrations, the Fosbury flop might have come to mean Dick Fosbury's failure to win or even compete in the high-jump event instead of the name of the innovative high-jump style of the winner of the

gold medal and world record holder. And before Doc Cooper got hold of him earlier that day, he was in such pain that he could not even bend over. "Only competing athletes could be on the field," Cooper recalls. "So I watched from the sidelines, standing on a chair. Just before the event began, Dick bent over and touched the floor and said, 'Doc, my back hasn't felt this good in months.' Then, he went out and made history."

Cooper had been very pleased to learn that he would be recommended to be the head team physician of the 1972 games in Munich. But he says he unwittingly ran afoul of one of the influential people whose support he had to have. When the announcement was made, Cooper had been passed over. He says it is just as well, given the ghastly murders of the Israeli athletes by terrorists. That same year, he contributed "his most significant article" in the Cooper bibliography of 48 to the special Olympics issue (August 28) of *The Journal of the American Medical Association*.

After reviewing the literature and calling upon his own experience as a team physician, he wrote in "Drugs and the Athlete" that there is "no good scientific evidence that any of these [so-called performance-enhancing drugs] really help anyone's athletic performance. The drugs make people feel they are better, but it is an illusion. Chemical shortcuts are not a substitute" for "hard work, self-discipline, practice and sacrifice. Normal is the best there is."

Although Doc Cooper writes well enough, he doesn't like to do it, complaining that it is "too damn hard." His articles lack the inspiration, zest and humor of his public speaking. That may be partially due to the fact that the articles are written mainly for academic journals while his public speaking often has been, well, for the public. He appeared on "The Today Show," "Good Morning America," "CNN Sports," and on two segments of author James Michener's highly acclaimed PBS-TV series, "Sports in America." (He introduced Michener to Henry Iba and witnessed their two-hour conversation on basketball and still laments that he didn't have the sense to have a tape recorder handy.)

His expert opinion has been quoted in newspapers around the country and in *Sports Illustrated*. He testified twice before congressional committees on sports medicine issues. The list of his contributions to the field goes on and on. As a sports columnist in 1977 introduced him to readers: "Dr. Cooper is Oklahoma



**Dr. Cooper is recognized by President Ronald Reagan.**



**Dr. and Mrs. Cooper with Arnold Schwarzenegger at a Special Olympics function.**

State team physician and a bunch of other things. He's on more committees than Henry Kissinger was. He has as many titles as Earle Stanley Gardner."

Much of his public appeal is owed to his outspokenness, especially as an advocate for athletes. Many years ago in a football game between OSU and Texas in Austin, a UT player got knocked cold. Cooper got to him first and was relieved first to see that his airway was open. The OSU coach, Phil Cutchin, tried to wave off Cooper, saying "don't touch him, he's the enemy." Cooper looked up at the coach, towering and glowering over him, and said, "This boy isn't the enemy; he is someone's child."

Cooper has also been an outspoken advocate for "this country's crying need to once again make physical education mandatory in schools." His passion for the issue and flair for speaking, in part, got him appointed by President Reagan and reappointed by President Bush to the President's Council on Physical Fitness and Sports. Serving from 1981 into 1993, he enjoyed making most of these 30 or so annual speaking engagements and meeting other Council members including former Washington Redskins coach George Allen and actor Arnold Schwarzenegger. But he had to admit that the trend away from physical educa-

tion has been irreversible. "Children are the tragedy of our country," he said in 1990. "Society is failing them in fitness. We rank 19th in the world regarding physical education in schools. That's embarrassing."

His own health had always been excellent "mainly because I pulled my own golf cart several times a week for more than thirty years," he says. Along the way, he shot some very good scores, had a 6 handicap at one time and won the OSMA golf championship in 1967-68.

His depression returned three or four times, but it always responded well to medication. Then this past spring during the Big 12 basketball tournament in Kansas City (his 42nd consecutive conference tournament) he experienced five or six episodes of "substernal discomfort." A few days later in Tulsa, he was surprised and chagrined to learn from his cardiologist that he needed immediate by-pass surgery, five grafts as it turned out.

The underlying cause, Cooper says, is probably in his family tree, which is rife with coronary artery disease. But the trigger may have involved the stress of his retirement as OSU team physician in May 1998 and a round of honors held for him that year. (Honors are not nearly so stressful to recipients who are still earning them.)



**Dr. Cooper stands next to Presidential certificates of which he is most proud. The large one is from President Reagan.**

On Statehood Day, November 18, 1998, Cooper was one of six people inducted into the Oklahoma Hall of Fame, which he says after being Olympic team physician was his greatest honor. That evening, he quipped that although he never made any money in sports, he was pleased to be inducted "with five millionaires."



**Dr. Cooper is congratulated by producer Jimmy Baker at the Oklahoma Hall of Fame awards presentation.**

A few months earlier, he and Dona returned for a special occasion in his hometown, Columbus, Kansas—back where he was known as Donnie Lee. Demonstrating that truth is stranger than fiction, the one-time diminutive waterboy and athletic non-starter was named a charter member of the city's Sports Hall of Fame. J

## **54-Year-Old Man with Progressive Dementia: A Clinicopathologic Correlation Conference from the University of Oklahoma College of Medicine**

George W. Kariampuzha, MD; Kersi J. Bharucha, MD; Roger A. Brumback, MD

### **Case Presentation**

#### **George W. Kariampuzha, MD**

This man first presented with the insidious onset of dementia beginning at about age 54 years. He had retired from work as an aircraft mechanic at Tinker Air Force Base four years earlier at age 50 years due to hearing loss. His initial symptoms consisted of an inability to name objects and forgetting the location of some common household items. However, his immediate and recent memory appeared to be otherwise intact. Two years later at the age of 56 years, he was unable to manage his checkbook. Over the following year, his speech output gradually declined. He had marked echolalia and his sparse spontaneous speech made little sense. By age 57 years, he also developed an inappropriate affect with outbursts of laughter on exposure to sad or stressful situations, while being apathetic the rest of the time. By age 61 years, seven years after the onset of the illness, he became almost mute.

About age 57 years, clumsiness in eating was noted with difficulty in chewing which grew progressively worse. By age 61 years his dysphagia was so severe that he required tube feeding. His poor oral intake resulted in his loss of approximately 50 kg during his last several years of life.

Although he evidenced some hand coordination problems at age 57 years, his visuospatial skills such as dressing or parking a car were intact. However, a year later he developed ideomotor apraxia being unable to perform tasks such as using a screwdriver and writing. At that time his family prevented him from driving.

His favorite pastimes had been reading books and farming. However, by the age of 58 years, four years after the onset of his illness, he

stopped these activities. In addition, he developed paranoid ideation, thinking that people were trying to kill him. He also exhibited outbursts of erratic and violent behavior about once a month for a six-month period and even threatened to kill his wife on several occasions.

At age 60 years, he became incontinent of urine. He was noted to have a bewildered look on his face with a "glassy stare" and made little eye contact. When his wife stood in front of him while he was sitting, he was noted to tilt his head backwards in order to look at her.

A year later at age 61 years, he lost his ability to obey simple commands. His gait became very slow with short steps and truncal ataxia. He was started on amitriptyline to "help him relax." No other medications were instituted except for continuing his antihypertensive regimen that had been started 10 years previously.

By age 65 years, he had marked truncal rigidity, minimal limb rigidity, and a fine tremor of the hands bilaterally. No dystonic posturing or myoclonic movements were noted. He died one month after his 65th birthday.

His family history was only remarkable for uncontrolled diabetes mellitus and end stage renal disease in his mother, "mental illness" in his father's sister, and a fatal stroke at age 70 years in his father. [Note: With the managed-care constraints currently being placed on laboratory investigation of patients, this case will be used to illustrate how a detailed neurologic history along with examination findings can lead to a neurologic diagnosis without laboratory testing.]

**Question: How long ago was he evaluated and why are his diagnostic studies not available?**

Direct correspondence to: Roger A. Brumback, MD, Department of Pathology, BMSB 451, OUHSC, 940 Stanton L. Young Blvd., Oklahoma City, Okla. 73104.

**Dr. Kariampuzha:** He was evaluated about 10 years ago and CT scan and EEG were reportedly normal. Unfortunately, the records of these have been destroyed.

### Case Discussion

#### Kersi J. Bharucha, MD

This case is of a patient with dementia and some parkinsonian features first appearing in a middle-aged man. The onset of the illness is one of the most important things that we have to consider. This patient's illness began with dementia. It is important to note that he did not begin with parkinsonian symptoms. The symptomatology at the onset of the illness provides us with clues about what this could and could not be. This patient had prominent language problems, specifically naming difficulties, and later on had a reduction in spontaneous speech. When his speech output declined, he repeated things that were said to him, and later he became completely mute. He had a pseudobulbar affect with inappropriate laughing and crying. He had some paranoid ideation. Early in the course of his disease, his behavior had changed markedly. Apparently his recent memory was intact during the first few years of his illness.

Unfortunately, we are not provided with a mini-mental state exam or detailed neuropsychometric testing. He had prominent psychiatric disturbances including paranoid ideation and aggression. Late in the course of the disease he developed parkinsonism without prominent tremors. Apparently, at no stage of the illness did he have the prominent tremors typical of Parkinson's disease.

Let us attempt to localize some of the findings. The language difficulties and the ideomotor apraxia would localize to the cerebral cortex.<sup>1</sup> The personality changes, paranoia, and pseudobulbar affect would also localize to the frontal lobes,<sup>2</sup> although the paranoid ideation might also relate to the amygdala (located in the temporal lobe). Destruction of the amygdala results in rage reactions and paranoid behavior, so this patient may well have had something wrong in the temporal lobes. We have been told that later on he developed some truncal ataxia, which suggests a midline cerebellar lesion, presumably involving the cerebellar vermis. His parkinsonian rigidity is an extrapyramidal symptom. Thus, in summary, this patient apparently had a combination of problems related to the frontal lobes, possibly temporal lobes, possibly extrapyramidal system, and cerebellum. A neurologist did not examine the patient and

hence some of the descriptions may contain inaccuracies.

The onset of this patient's problem was insidious. Understanding the onset of the disease is very important in evaluating patients with neurologic problems. The insidious onset of the patient's problem rules out a stroke. The disease was steadily worsened over about 11 years. This indicates that he did not have a monophasic illness but rather a progressive process.

Let us now consider different categories of neurologic diseases. Was this a cerebrovascular, demyelinating, infectious, post-infectious, neoplastic or paraneoplastic, toxic/metabolic, inflammatory, neurodegenerative, nutritional (like vitamin B<sub>12</sub> deficiency), or psychiatric illness? Each of these possibilities needs to be considered and ruled out.<sup>3-5</sup>

Since, as I stated previously, the onset was not acute, cerebrovascular disorders are unlikely. The patient could have had multiple strokes, but we would have expected a step-wise downhill progression, which he apparently did not have.<sup>6</sup> Also, the possibility of this being a vasculitis would be unlikely.

Could it have been the result of an infectious or post-infectious process? There are some viruses that can produce post-infectious demyelination, but the clinical course in this patient is very unlike multiple sclerosis or any other demyelinating disorder. Neurosyphilis was called the "great mimic" several decades ago and it can produce disease processes that mimic virtually every neurologic disorder including cerebellar ataxia, parkinsonism, and dementia. While I cannot entirely rule out neurosyphilis, I would find it unlikely that a positive RPR would have been missed.

Additionally, he did not have any of the typical features of neurosyphilis such as the Argyll-Robertson pupil or signs of tabes dorsalis. The prion disorder Creutzfeldt-Jakob disease initially presents with dementia and parkinsonism but these patients have myoclonic jerks and a much shorter clinical course. The typical case of Creutzfeldt-Jakob disease evolves and progresses over four to five months. As we all are aware, human immunodeficiency virus (HIV) infection is the other mimic, but I have not heard of HIV presenting with the features that this patient had.

Could this patient have had a neurometabolic disorder like Wilson's disease? Wilson's disease is a very rare autosomal recessive disorder and I have come across only a few patients during my career. Wilson's disease can certainly present with psychiatric disturbances, dementia, parkin-

sonism, and cerebellar signs. It is treatable, so it is important to keep this disease in mind. Nevertheless, since the patient's symptom onset was at age 54 years, Wilson's disease would be unlikely.

Could this patient have had normal pressure hydrocephalus? He did have progressive dementia, urinary incontinence, and signs of parkinsonism. Normal pressure hydrocephalus should probably always be considered in someone with lower body parkinsonism. Against normal pressure hydrocephalus in this case would be the long course and the dysarthria, ideomotor apraxia, and language disturbances.

Could it have been a toxic or metabolic disorder? There is nothing in the history suggesting spinal cord involvement, which is characteristic of vitamin B<sub>12</sub> deficiency, but vitamin B<sub>12</sub> deficiency has been reported to present with dementia. However, I know of no case of vitamin B<sub>12</sub> deficiency in which parkinsonism was a predominant symptom. Toxins such as manganese or mercury can produce parkinsonism and dementia, and would need to be considered, but I think this is unlikely. Of course, alcohol is a very common toxin consumed by many of our patients. There is no indication in the history that this patient was an alcoholic, but he did possibly have midline cerebellar signs (ataxia) which go along with the effects of alcohol.

Could this have been an inherited disorder? Spinocerebellar ataxia type III (also known as Machado-Joseph disease) needs to be considered. This has a much younger age of onset, usually a positive family history, and signs of prominent cerebellar ataxia, parkinsonism, and peripheral neuropathy in varying combinations. Dementia, as found in our patient at the onset of the illness, is not a prominent feature of Machado-Joseph disease.

What about Huntington's disease? Certainly Huntington's disease should be in the differential diagnosis of dementia in an elderly person. However, he did not develop the choreiform or other movement disorders (like dystonia) that I would have expected over a 10- to 11-year course of illness.

Could this have been a leukoencephalopathy, such as metachromatic leukodystrophy or Krabbe's disease? While there are adult-onset versions of these disorders, they are very rare and one would have expected a CT or MRI to show white matter abnormality. Additionally, this patient had a cortical dementia, not the subcortical dementia, which would be expected with leukoencephalopathy.<sup>7</sup>

Could this have been a neurodegenerative disorder? The best-known neurodegenerative dementias are Alzheimer's disease and Pick's disease, but there is also an entity called frontal lobe dementia of the non-Alzheimer type, which probably represents several different conditions. The neurodegenerative diseases that present predominantly with parkinsonism are Parkinson's disease, progressive supranuclear palsy, cortical basal ganglionic degeneration, and multiple system atrophy.<sup>8,9</sup> Patients that present with both dementia and parkinsonism have a disorder termed diffuse Lewy body disease (or Lewy body dementia).

Could this patient have had Alzheimer's disease? Patients with Alzheimer's disease have an amnesic syndrome; that is, they have prominent problems with recent memory as an early feature. Personality changes occur late in the course of Alzheimer's disease. Patients with Alzheimer's disease also develop visual-spatial disturbances, such as getting lost while driving, forgetting where the bathroom is in the house, and forgetting where they have kept their keys.

This patient apparently did not have an amnesic problem early in the course, so I think Alzheimer's disease would be unlikely. However, I cannot absolutely rule out Alzheimer's disease, since there are many cases of atypical presentations for that disorder. I am sure Dr. Brumbach has seen quite a few incorrect clinical diagnoses that turned out to be Alzheimer's disease at autopsy.

Pick's disease is a much rarer condition than Alzheimer's disease and memory loss is a late feature. Our patient had preserved memory early on, but some memory problems later. Personality changes occur early in Pick's disease, and he did show early personality changes such as paranoid ideation and aggressive and bizarre behavior. The emotional personality changes in Pick's disease seem to relate to damage to the amygdala. Language disturbances are also prominent with Pick's disease and include echolalia, repetitive speech, and later mutism. In contrast, mutism is uncommon in Alzheimer's disease.<sup>10</sup> Pick's disease seems to be a definite possibility in this patient, and I will come back to that later.

Could this patient have had idiopathic Parkinson's disease? Idiopathic Parkinson's disease is characterized by prominent resting tremor, although tremor can be absent in up to 25 percent of patients. Could this patient have had the akinetic rigid form of idiopathic Parkinson's disease? That would be very unlikely since dementia is almost never a symptom of early

Parkinson's disease. Dementia can occur late in the course of Parkinson's disease but is typically mild. It would have been helpful to know whether this patient was responsive to levodopa or Sinemet® but that information is not available. I believe a diagnosis of idiopathic Parkinson's disease is very unlikely in this case.

However, there is another condition called progressive supranuclear palsy (or PSP).<sup>11-13</sup> Patients with PSP have disturbances of ocular gaze and typically lose the ability to look down or look up. Downgaze is usually lost first, with upward gaze problems developing later.<sup>14-15</sup> There is some suggestion of a gaze problem in the history of this patient. He had to tilt his head backwards to look at his wife. PSP patients also have prominent truncal rigidity as opposed to the limb rigidity in Parkinson's disease. This patient may have had PSP. However, in PSP, dementia is not prominent early, but becomes evident later.

The second concern with the diagnosis of PSP is that he did not have falls. Backward falls are almost mandatory in the clinical criteria for PSP, so without a history of such falls I am unable to make a diagnosis of PSP in this patient. Nonetheless, I think PSP remains a strong possibility.<sup>16-17</sup>

Could this patient have had dementia with Lewy bodies (diffuse Lewy body disease)? Such patients have clinical features of both parkinsonism and dementia. However, they have prominent visual hallucinations and once the diagnosis is made they usually rapidly deteriorate over about three to four years, almost always requiring nursing home confinement. Patients with diffuse Lewy body disease are very sensitive to neuroleptic medications or Sinemet®, but we do not have any history of treatment with these medicines. Without a history of visual hallucinations and fluctuating cognitive disturbances, diffuse Lewy body disease seems unlikely.

Multiple system atrophy is a condition that is often confused with idiopathic Parkinson's disease. Patients can have cerebellar ataxia, parkinsonism, and autonomic disturbances in varying combinations. The variant with predominant parkinsonism is known as striatonigral degeneration. Prominent ataxia is evident in the olivoponto-cerebellar atrophy (OPCA) type of multiple system atrophy. Most internists are familiar with the form of multi-system atrophy with prominent autonomic features, termed the Shy-Drager syndrome, in which there are marked orthostatic blood pressure changes associated with dizziness and lightheadedness. Multiple system atrophy seems unlikely in this case since

such patients are almost never demented early in the disease course.

Could this patient have had cortical basal ganglionic degeneration? This is a very unusual and interesting disorder, which begins asymmetricaly. These patients are almost never demented at the onset. Later the arms become dystonic and useless with spasms and jerks consistent with myoclonus. Patients also have the "alien limb phenomenon." The limb seems to have "a mind of its own" and "does whatever it wants to do."

For example, when driving, the hand might wander off and grab the mirror or the door handle. In another example, while walking past a table, the arm might reach out and grab something. Patients with cortical basal ganglionic degeneration also have ideomotor apraxia, cortical sensory loss, and aphasia, features present in our patient. However, in cortical basal ganglionic degeneration, dementia is mild and a late feature, so that diagnosis seems less likely in this patient.<sup>18</sup>

To make matters more difficult, there is actually considerable pathological overlap between many of these neurodegenerative disorders. Pick's disease is characterized by Pick bodies and balloon cells. Progressive supranuclear palsy has neurofibrillary tangles (as occurs in Alzheimer's disease). Cortical basal ganglionic degeneration and Pick's disease are known to overlap pathologically. Thus, the clinical and neuropathologic overlap of these conditions provides diagnostic dilemmas for the practicing physician.

I believe that our patient most likely had Pick's disease. In the differential diagnosis of neurodegenerative diseases, the only two conditions that start off as dementia are Pick's disease and Alzheimer's disease. Of these two, Pick's disease generally has prominent personality changes at the onset and then later develops an akinetic rigid parkinsonism syndrome and dysphasia (and finally mutism), similar to the features of this case. If this patient did not have Pick's disease, progressive supranuclear palsy (PSP) would be my next choice.

I put this diagnosis second only because the patient did not have a history of prominent falls. If a history of falling could be obtained, I would make progressive supranuclear palsy my first diagnosis.

#### **Pathology Correlation** **Roger A. Brumback, MD**

Unfortunately, for most neurodegenerative diseases, we can only make the definitive diagnosis

at autopsy and that is why I get to be here. Dr. Bharucha provided us with a superb analysis and his second diagnostic possibility was correct. This is a case of progressive supranuclear palsy or Steele-Richardson-Olszewski syndrome, sometimes also called "Parkinson's plus." Progressive supranuclear palsy was first described in 1963<sup>19</sup> and its symptoms are gait unsteadiness, paralysis of downgaze, neck extensor rigidity, bradykinesia, pseudobulbar palsy (mask-like or spastic face), apathy, depression, and dementia.<sup>20-22</sup> Interestingly, in the past, dementia was considered a relatively late sign in progressive supranuclear palsy, but as more cases have been described this is less true. The pathology in this case was characteristic of progressive supranuclear palsy.

Figure 1 shows the tremendous atrophy of the midbrain, characterized by enlargement of the aqueduct and loss of the midbrain substantia nigra, with only rare residual neurons. Neurofibrillary tangles were present in neurons throughout the brainstem, cerebellum, and basal ganglia.<sup>23</sup> Unlike Alzheimer's disease, in which the neurofibrillary tangles occur in subcortical structures (Fig. 2).

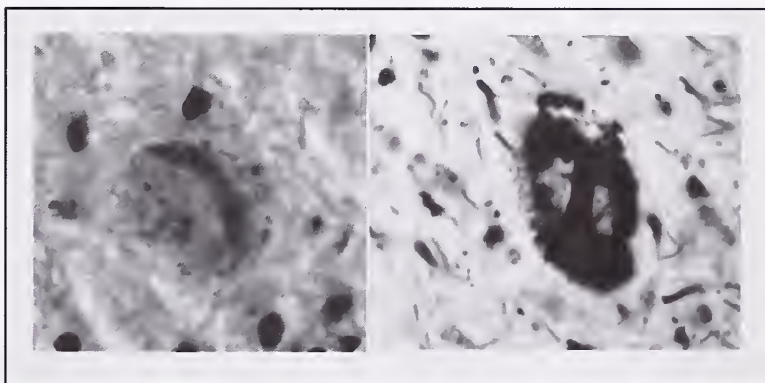
How does the neuropathologist approach cases of neurodegenerative disease? One of the first things to look for is evidence of amyloid plaques (Fig. 3). If amyloid plaques are present, it is then necessary to determine the biochemical nature of the amyloid.<sup>24</sup> If the amyloid plaques are composed of  $\beta$ /A4-amyloid, then the diagnosis is Alzheimer's disease. The  $\beta$ /A4-amyloid is produced from a relatively brain-specific protein called amyloid precursor protein. On the other hand, if the amyloid plaques consist of prion protein, the diagnosis falls into the class of disorders known as transmissible spongiform encephalopathies, of which the so-called "mad cow disease" is recently the most notorious.

If intraneuronal inclusions are present there are several diagnostic possibilities (Fig. 4, 5, and 6). Lewy bodies are the characteristic histopathologic hallmark of idiopathic Parkinson's disease, found in the neurons of the midbrain substantia nigra. If Lewy bodies are present in the cerebral cortex, as well as in the midbrain, the diagnosis would be diffuse Lewy body disease (Lewy body dementia) which Dr. Bharucha mentioned in his discussion.<sup>25</sup>

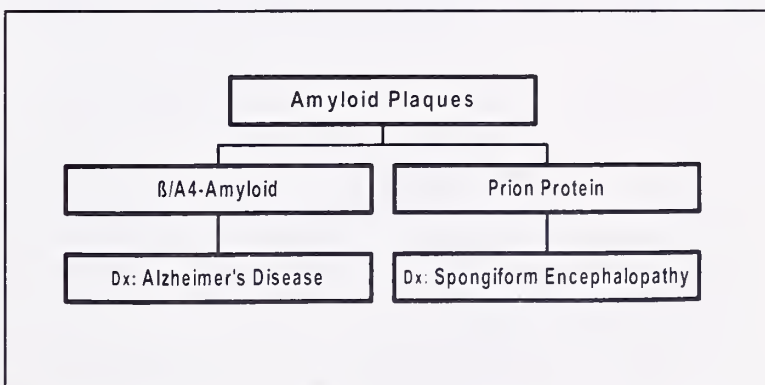
Another intraneuronal inclusion is the Pick body, which is considered to be characteristic of Pick's disease. Pick bodies are generally found throughout the cerebral cortex but are in greatest abundance in the hippocampus.



**Figure 1.** Atrophy of midbrain in patient (right) compared with normal midbrain (left).



**Figure 2.** Neurofibrillary tangles in pigmented substantia nigra neurons (left H&E stain; right Bielschowsky silver stain; original magnification X600).



**Figure 3.** Diagnoses based on types of amyloid plaques in neurodegenerative disorders.

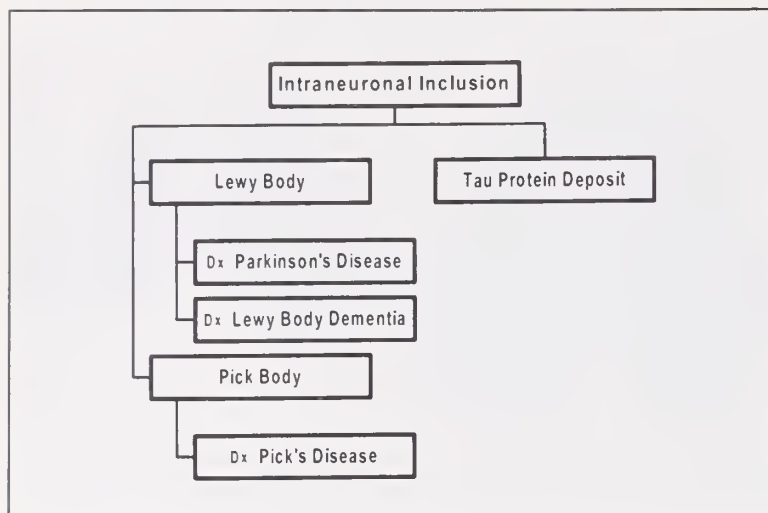


Figure 4. Diagnoses based on types of intraneuronal inclusions in neurodegenerative disorders.

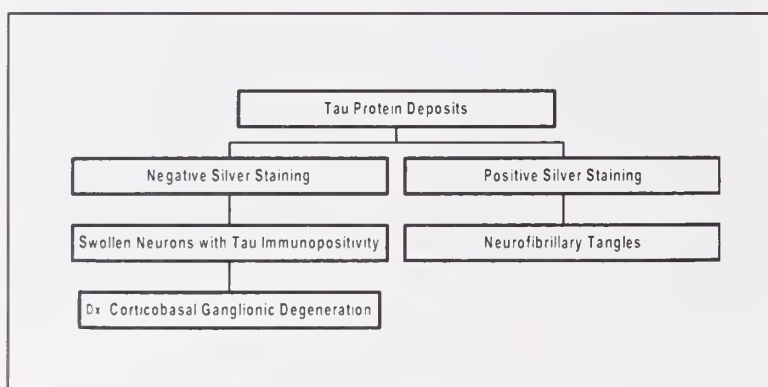


Figure 5. Diagnoses based on types of tau protein deposits in neurodegenerative disorders.

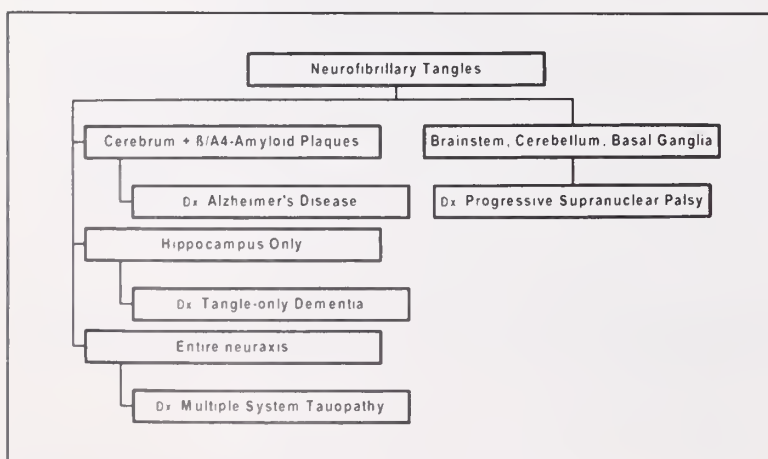


Figure 6. Diagnoses based on distribution of neurofibrillary tangles in neurodegenerative disorders.

The other major intraneuronal inclusion is the tau protein deposit. Tau protein, also called microtubule-associated protein (MAP- $\tau$ ), is an important normal constituent of neurons. After ribosomal synthesis, tau protein is phosphorylated and polymerized to form the neuronal microtubules. For as yet unknown reasons, tau protein can be excessively phosphorylated (hyperphosphorylated). The hyperphosphorylated tau protein cannot form into microtubules, and instead polymerizes into paired helical filaments.<sup>26</sup> If the paired helical filaments are only visible using immunocytochemical stains for the hyperphosphorylated tau protein, the diagnosis is cortical basal ganglionic degeneration. When enough paired helical filaments accumulate in a neuron, they become visible by light microscopy and are called neurofibrillary tangles.

Alzheimer's disease would be the diagnosis if the neurofibrillary tangles are in the cerebrum and are associated with  $\beta$ /A4-amyloid plaques. If there are no  $\beta$ /A4-amyloid plaques and the neurofibrillary tangles are only in the hippocampus, the diagnosis is tangle-only dementia, but if the neurofibrillary tangles are present throughout the entire neuroaxis, the diagnosis is multiple system tauopathy. When the neurofibrillary tangles occur only in the brainstem, cerebellum, and basal ganglia, the diagnosis is progressive supranuclear palsy.

Some patients with progressive supranuclear palsy have been reported to have cerebral cortical atrophy and a few neurofibrillary tangles in the cerebral cortex. That is what this patient had, which explains the dementia.

What about the genetics of these neurodegenerative diseases? At this time, molecular biology does not provide much help, since the genetics remains confusing. In Alzheimer's disease, there are at least four genetic loci involved with the  $\beta$ /A4-amyloid. The amyloid itself originates from amyloid precursor protein which is coded by a gene on chromosome 21. Apolipoprotein E (particularly the E4 isoform) seems to have some effect in promoting amyloid precipitation. Abnormalities in the presenilin 1 and 2 genes appear to play a role in overproduction of the amyloid precursor protein that is then broken down into amyloid.

Of course Dr. Stanley Prusiner's Nobel Prize winning work showed that a gene on chromosome 20 codes for prion protein which is a normal constituent of neurons. In a variety of circumstances, the prion protein can precipitate into amyloid resulting in the various transmissible spongiform encephalopathies (such as

Creutzfeldt-Jakob disease). The tangle only dementia and multiple system tauopathy seem to relate to the tau protein gene on chromosome 17.<sup>27</sup>

**Question:** Since this patient's disorder was an untreatable condition, what would have been the appropriate initial evaluation?

**Dr. Bharucha:** The most important part of the evaluation is an adequate history and examination. Often a good history and examination will separate many of these diseases. Usually it is not possible to make the diagnosis on the first visit but the patient needs to be followed for a period of six months to a year until the diagnosis becomes clear. Unfortunately, 10 years after onset, many of these disorders look the same, making any diagnosis difficult at that time. It is best to evaluate the patient carefully early in the course of the disease and then follow the clinical progression to establish the diagnosis.

Beyond the history and examination, the diagnostic work-up can be relatively minimal, but should include tests for neurosyphilis and MRI scan of the brain<sup>28</sup> to look for atrophy in selected regions. Some of the newer imaging techniques may turn out to be useful in the future.

The positron emission tomographic (PET) scan<sup>29</sup> has been a research tool, but the SPECT scan (a "poor man's" PET scan) has been used to identify changes in subcortical neurotransmitter systems in various neurodegenerative disorders. Nonetheless, the most important part of the evaluation remains careful history and examination coupled with long-term follow-up. Using just the history and examination and follow-up, a diagnosis is possible about 90 percent of the time.

**Question:** What is the accuracy of clinical diagnosis?

**Dr. Bharucha:** There have not been a lot of studies comparing clinical and pathologic diagnoses in movement disorders, but one such study of idiopathic Parkinson's disease showed that the premortem diagnosis is wrong in about 25 percent of cases studied pathologically. □

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## Hepato-biliary Abnormalities Secondary to Ceftriaxone Use: A Case Report

Celestino Vega, MD; Patricia M. Quinby, MD; Cheryl B. Aspy, PhD

**Table 1. Initial Laboratory Results**

|   |  |              |
|---|--|--------------|
| Urinalysis  | Negative   |              |
| Complete Blood Count  | WBC = 15,300; with 80% lymphs, 1% bands, 9% segs<br>Platelets = 476,000 RBC = 11.7<br>Hematocrit = 36; MCV=69; |              |
| Rotovirus   | Positive   |              |
| Mono spot, urine culture, blood culture, nosol washing and culture for adenovirus, EBV, stool culture, stool O&P, respiratory culture, strep screen, sickle cell screen, and hemophilus influenza | All Negative   |              |
| Chemistry Panel   | Patient Value  | Normal Range |
| LDH   | 334  | (100-225)    |
| AST   | 84   | (16-37)      |
| Alkaline Phosphatase  | 3580   | (60-300)     |

In 1997, the Food and Drug Administration approved ceftriaxone (Rocephin) for the treatment of otitis media. The purpose of this report is to alert practitioners to the potential for ceftriaxone to cause elevated liver enzymes (aspartate transaminase [AST], alanine transaminase [ALT], alkaline phosphatase), bilirubin and gallbladder abnormalities such as sludge or stones. This case report describes the emergency room and hospital course of a 10-month-old boy treated with intramuscular ceftriaxone who developed hepato-biliary abnormalities.

### Case Report

A 10-month-old infant was brought to the emergency department three times in one week due to an upper respiratory tract infection, otitis media, nausea, and vomiting. On his first two visits, he received intramuscular injections of

ceftriaxone 250 mg each time. On his third visit, a more extensive workup included a chemistry profile with liver enzymes, CBC, and urinalysis (Table 1). Before the patient's emergency department visit, his past medical and family history were noncontributory.

The patient was a product of a term birth (6 pounds, 5 ounces), an unremarkable pregnancy, and a spontaneous vaginal delivery. He was breast-fed for the first five months, and switched to lactose-free formula. His immunizations were up-to-date with normal developmental milestones and he had no history of surgeries or prior hospitalizations. He lived with both of his parents and one older sibling (brother) with a negative family history of inherited disease.

At the time of the hospital admission, the patient appeared to be ill and listless with a temperature of 101°. On physical examination, the neck was supple without adenopathy, tenderness, or rigidity. The ear examination revealed a right tympanic membrane which was dull and inflamed. The nose was slightly congested. Both tonsils had exudate with erythema. The mouth and sinuses were normal on clinical exam. The eyes were somewhat sunken, sclera were clear bilaterally and the pupils were equal, round, and reactive to light. The cardiovascular exam revealed an increased heart rate, regular rhythm without murmur; lungs were clear bilaterally. The abdomen was soft, nontender, nondistended, and without masses; bowel sounds were present. A small, less than 0.5 cm. umbilical hernia was noted. The genitourinary examination revealed a normal circumcised male with bilateral descended testes. There were +2 bilateral femoral pulses and free range of motion; there was no clubbing, cyanosis, or edema of the extremities. There was good capil-

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lary refill and perfusion. The neurological exam was without focal deficit. Reflexes were normoactive.

The impression at the time of admission from the emergency department was that the patient had 1) acute exudative tonsillitis, 2) right otitis media, 3) gastroenteritis, 4) dehydration, and 5) elevated liver function tests of questionable etiology. The patient was started on IV antibiotics (cefotaxime-Claforan) and IV fluids appropriate for age and weight.

During the hospital course, the patient responded well to medical treatment (Table 2). Studies showed him to be positive for rotavirus. His alkaline phosphatase level was markedly elevated and his lactate dehydrogenase and aspartate aminotransferase values were high. His radiographic studies, including gallbladder ultrasound, were normal (Table 3).

The patient was discharged on the sixth hospital day in improved condition.

#### Comment

Ceftriaxone is the third generation cephalosporin with wide-range activity against gram-positive and gram-negative bacteria. It has a long half-life and is eliminated mainly by the kidney (60%), and excreted into the bile (40%). Due to its wide range of activity, ceftriaxone is commonly used for infections both in children and in adults.

Because 40 percent of ceftriaxone is excreted unchanged into the bile, it may cause the formation of drug-induced gallstones by precipitation of a calcium salt of ceftriaxone when the concentration in the bile exceeds its saturation level. Sludge and stones may cause cholestasis as well as acute cholecystitis requiring surgery. Ultrasound studies may show stones in up to 25 percent of patients treated with ceftriaxone. On biochemical analysis, the stones are essentially ceftriaxone.<sup>1</sup>

Family history plays a role in the likelihood of stone or sludge development. In children with a positive family history of gallstones, up to 12 percent developed biliary lithiasis when treated with ceftriaxone.<sup>2</sup> Therefore, ceftriaxone may not be the first choice of antibiotic in patients with dehydration and a family history of gallbladder disease.

In 1988, Schaad<sup>3</sup> reported a prospective study of 74 children in Switzerland with meningitis who were followed with ultrasound and laboratory evaluations. Sixteen (43%) of the 37 patients treated with ceftriaxone developed biliary concretions. In that group of patients, biliary precipitations were found from day 4 to day

**Table 2. Alkaline Phosphatase Values Across the Hospitalization Period**

| Hospitalization Time Period | Alkaline Phosphatase Value |
|-----------------------------|----------------------------|
| Initial                     | 3580                       |
| Day 2                       | 2746                       |
| Day 3                       | 2061                       |
| Day 4                       | 1516                       |
| Day 6                       | 932                        |

**Table 3. Radiographic Findings**

|  |                             |
|--|-----------------------------|
| Chest x-ray, renal ultrasound<br>voiding cystourethrogram, IVP,<br>bone survey, abdominal ultrasound | All within<br>normal limits |
|--|-----------------------------|

22 with a mean of day 9, and these had completely resolved from day 2 to day 63 with a mean of day 15. One patient who developed both renal and gallbladder calculi had a maternal family history of both nephrolithiasis and cholelithiasis. That patient had renal colic and transient impaired renal function.

In this study, the sex distribution, the type of infection, the dose, duration and time of administration of ceftriaxone were similar for both treated patients and controls. These findings may be of little or no consequence in children with normal gallbladder, biliary tract, liver and pancreas. However it may be of some clinical significance in adults and children with a pre-existing disease. These patients are recommended to have serial ultrasonography. Any patient who develops colicky abdominal pain on ceftriaxone should have ultrasound of the biliary tract, laboratory evaluation and consider a change in antibiotic.<sup>4</sup>

There are multiple reports in the literature of patients with elevated hepato-biliary enzymes of unknown etiology, particularly in the pediatric population, who were believed to have a transient biliary stasis secondary to high doses of ceftriaxone and who had normal ultrasound of the gallbladder and liver.<sup>5-7</sup> In those patients, dehydration coupled with ceftriaxone administration has been postulated to cause gallbladder and biliary sludge.

A case was reported in 1991<sup>5</sup> of a patient whose gallbladder stones consisted of 80 percent ceftriaxone and 20 percent bilirubin. It has been suggested that patients on total parenteral nutrition or those not eating well may be at a higher risk for biliary deposition of sludge as the bile salt of ceftriaxone may reach concentrations of up to 100 to 200 times that of serum levels. Therefore, high doses or prolonged therapy in patients with impaired

gallbladder function should be closely monitored.

A 1990 article by Shiffman<sup>6</sup> stated that ceftriaxone possesses high affinity for calcium binding. In vitro studies concluded that ceftriaxone induced biliary sludge due to a solubility problem occurring in patients receiving doses equal to or greater than 2 grams IV every 24 hours. The authors proposed that any condition with impaired gallbladder emptying might also cause problems in addition to the effects of high dosages. Severely ill patients may have little or no stimulus for gallbladder contraction and emptying. As ceftriaxone concentration builds up, a super-saturated level may cause precipitation of calcium salts resulting in "concretions."

In 1991<sup>7</sup> a reported case of reversible biliary obstruction after ceftriaxone use was documented by DISIDA (Disofenin Imino Diacetic Acid Analogue) scan. The patient had biliary symptoms, pain, colic, nausea, and vomiting. On ultrasound, sludge showed up in the most dependent part of the gallbladder. In this patient, the common bile duct was obstructed with sludge, the serum amylase was elevated, as were AST, ALT, and alkaline phosphatase levels. A follow-up ultrasound showed complete disappearance of "stone." These authors noted that in patients whose gallbladder had been removed at surgery, there usually were no signs of acute or chronic cholestasis. It is believed that up to eight weeks may be necessary for the biliary sludge to dissolve. Older patients on calcium supplements may have increased biliary calcium levels and be predisposed to precipitation of ceftriaxone salts in the gallbladder.<sup>7</sup>

In the case presented for discussion, it would be a consideration that the liver function abnormalities might be caused by Human Rotavirus. Tallet et al in a 1977 study, explored viral gastroenteritis in infants and children caused by Human Rotavirus (HRV). In this study, nine of 23 children were found to have elevated SGOT levels. However, the authors concluded that hepatic abnormalities were not associated with HRV.<sup>8</sup>

### Summary

Ceftriaxone was approved in 1997 for the treatment of otitis media despite previous studies that documented an association of ceftriaxone with elevated hepato-biliary enzymes and transient biliary stasis. The case cited here highlights the need for continued awareness education for physicians who may use ceftriaxone to treat common illnesses such as acute exudative tonsillitis and otitis media in children. Specifically, for

children with a family history of gallbladder, biliary tract, liver or pancreas dysfunction, ceftriaxone may not be the drug of choice since the likelihood of complications is increased in this population. Additionally, ceftriaxone may cause problems in either adults or children with pre-existing disease, who may not be well-nourished, or who may be dehydrated.

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# THE CONNECTED CLINICIAN

## Information Management in Medicine

Chris Candler, MD

Clinicians today are bombarded with information from multiple disparate sources. The phrases "information explosion," "information anxiety" and "information overload" are commonplace in the media and literature. Each day, physicians are greeted with a tsunami of information as phone calls, medical literature, and patient data all vie for attention. Perhaps most disconcerting is the challenge of keeping current with new techniques and therapies. In fact, family physicians note that the lack of adequate knowledge and the poor dissemination of knowledge are leading causes of serious error and preventable adverse drug events.<sup>1,2</sup>

The numbers are astounding. Each year there are approximately 20,000 biomedical journals and 17,000 biomedical books published globally.<sup>3</sup> With 7,300 references added to Medline each week,<sup>4</sup> the growing body of biomedical information is a formidable challenge to most physicians. It is not surprising that in one study, most clinicians polled found the volume of medical literature unmanageable, impeding their ability to obtain needed information.<sup>5</sup> This wealth of new information may cause practitioners to find that they are thirsting for knowledge but drowning in information.

The problem is caused not only by the bewildering volume of information but also the diverse information sources that physicians must deal with. In 1950, 20 journals were the sources of 53 percent of cited papers in the *New England Journal of Medicine*; in 1985, the top 20 journals only accounted for 38 percent.<sup>6</sup> This information scattering effect only worsened with the advent of faxes, e-mail, the Internet and other methods of delivery. In this sense technology has added to the problem rather than fixing it.

Vannevar Bush, science advisor to Franklin Delano Roosevelt, was one of the first to notice

the problem and in 1945 noted that the tremendous growth of scientific knowledge made it difficult for researchers and educators to make the necessary associations between ongoing research and new discoveries.<sup>7</sup> He suggested that investigators find better ways and tools to record and examine the scientific record. In his landmark paper he proposed the invention of a theoretical personal information device that he referred to as the Memex, a machine that could help an investigator store, navigate, and manage information. Bush's remarkable foresight described what we know of today as a networked computer. Unfortunately, physicians do not routinely adopt such technology into their professional routines.<sup>8</sup>

Physicians must find better ways to filter, evaluate, and absorb the sea of information that surrounds their practice and discipline. Technology can help. However, to be most useful, technology should be integrated throughout the many facets of a clinician's practice. One obvious way that technology may be of assistance is through the use of personal information management (PIM) tools. These products have gained tremendous popularity in the past few years by integrating features such as e-mail, address books, task lists, notes, and journal options. These tools have gained portability with the advent of handheld computing devices such as the 3COM® PalmPilot™ and the Phillips® Nino™. Clinicians may find that these tools can help them better manage their chaotic schedule and correspondence.

Technology has the potential to transform the traditional paper-based medical record into a more powerful digital format. Though used by physicians for more than a century, the inadequacies of paper-based medical records have been well documented.<sup>9</sup> Modern electronic medical record systems boast numerous advantages over

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the traditional record including more precise documentation, improved data quality, consistent organization and better integration with systems used by external providers. Information from both the office practice and inpatient settings may be combined to form a master record, accessible by providers in a variety of locations. Additionally, electronic medical records have the capacity to present patient information in a more integrated and comprehensive manner, providing clinicians with a more complete understanding of patients and their conditions. As the database of patients grows, providers will be able to analyze their patient population and commence public health surveillance.

Technology can not only help physicians manage patient data but also assist with clinical decision-making. Computer-based decision support has been shown to improve clinical performance in terms of medication dosing, diagnosis, and preventive care.<sup>10</sup> Other decision-support systems have been shown to decrease unnecessary interventions and the use of surgical beds for patients with suspected appendicitis.<sup>11</sup> Newer predictive tools for decision support may employ a technology called artificial neural networks. This self-learning technology can uncover hidden relationships and produce generalizations and rules from uncertain data. Thus, given a set of patient data and outcomes, this technology can discover the complex inherent patterns and then develop reasonably accurate predictions regarding the outcomes of prospective patients and even develop rules for clinicians to use when making decisions.

Clinicians have a need to regularly consult medical literature to retrieve authoritative information regarding patient management issues. In the past, physicians have complained that traditional print journals and references were not sufficiently indexed and organized to meet their needs.<sup>12</sup> With the advent of web-based search engines, literature databases such as Medline, CancerLit and PSYCInfo can now be queried from almost any location, including the clinic, the office, and the bedside. Already, several journals are expanding their offerings to online full-text access. Various online information services such as MDConsult ([www.mdconsult.com](http://www.mdconsult.com)) and Medscape ([www.medscape.com](http://www.medscape.com)) are collaborating with publishers to offer healthcare providers turnkey access to clinical practice guidelines, treatment updates, various reference materials, and CME. It is important to note that effective utilization of these resources is a learned skill that requires an appreciation of various search techniques.<sup>13,14</sup>

In summary, physicians must view the information explosion as a benefit, not a barrier. The potential to reduce office chaos, improve outcomes, and keep up with rapid scientific progress is too great to ignore. However, like many medical techniques, these are learned skills that require time and dedication to master. Moreover, introducing technology broadly into the clinical setting requires a careful, low-impact implementation plan with appropriate training or the effort may suffer blatant opposition. Fortunately, technology is increasingly becoming more available and easier-to-use. Clinicians should take advantage of this progress and become better lifelong learners and expertly navigate the chaotic sea of information that surrounds them.

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## AMA Official Addresses Use of Tobacco Settlement Funds

Nancy W. Dickey, MD, immediate past president of the American Medical Association, came to the Oklahoma State Medical Association's headquarters for a June 29 news conference to discuss the importance of utilizing tobacco settlement funds for tobacco use research, prevention and cessation programs—especially among young people.

Dr. Dickey's visit to Oklahoma City was sponsored by the Oklahoma Academy of Family Physicians and the event was attended by reporters from across the state.

In addition, representatives from the Tobacco-Free Oklahoma Coalition (TFOC) were on hand to share recent survey results which showed how Oklahomans favor spending the tobacco settlement funds and to discuss key points from their "Tobacco Use Prevention and Reduction Plan for Oklahoma."

Robert McCaffree, MD, a spokesperson for TFOC, said nicotine, as supplied by tobacco and tobacco products, is the most deadly addicting product in our society today. He endorsed Dr. Dickey's proposal, saying, "It's a program about our children; it's a program about our future."

Dickey said that 40 percent of Oklahoma's high school students admit to using tobacco products. With



*Dr. Nancy Dickey, immediate past president of the AMA, was the guest of honor at a press conference held recently at the OSMA. Dr. Dickey is shown here with (above, from left) Jerry Nida, MD, Commissioner of Health for the State Department of Health; Bob Miner, chair of the Tobacco-Free Oklahoma Coalition; Gordon Deckert, MD, Board of Health member and spokesperson for OSMA's Physicians' Campaign for a Healthier Oklahoma; and Dr. Robert McCaffree, vice chair of the Tobacco-Free Oklahoma Coalition and immediate past president of the American College of Chest Physicians.*



*Pictured with Dr. Dickey during her recent visit to Oklahoma are Philip Palmer, MD, Representative Jari Askins, Senator Ben Brown, and Steven Crawford, MD. Drs. Palmer and Crawford represented the Oklahoma Academy of Family Physicians which sponsored Dr. Dickey's visit to Oklahoma City.*

that being the case, Dickey said Oklahoma has a tremendous need for youth education, especially when those who want to quit don't know about resources available to help them.

"Recognizing where the dollars came from, there is a great deal of concern that at least the first dollars coming in should be directed to tobacco education, tobacco research and tobacco prevention," Dickey said.

Oklahoma was one of 52 jurisdictions that reached a \$206 billion national settlement with several tobacco companies for various claims including the recovery of health care costs stemming from tobacco use that were paid by the state. Oklahoma is scheduled to receive just over \$2 billion (total) over 25 years. In addition, beginning in the eighth year, the state is scheduled to receive \$267,864,907.69 each year; then in the 26th year, the amount changes to approximately \$70 million annually. All amounts paid will be subject to reduction and escalation.

## News from the AMA Annual Meeting

Eight delegates and eight alternate delegates representing the OSMA recently attended the 200<sup>th</sup> meeting of the American Medical Association in Chicago. This year, the hot topic of debate was the AMA's decision to pursue formation of a "collective negotiating unit" to represent employed physicians and residents (where applicable). This issue received extensive debate in a special reference committee and on the floor of the House of Delegates. The OSMA Delegation was supportive of the AMA's decision.

Highlights of the AMA actions include:

- A directive that all AMA activities regarding physician negotiation maintain the highest levels of professionalism and be consistent with the AMA's Principles of Medical Ethics and the Current Opinions of its Council on Ethical and Judicial Affairs.
- Approval for the immediate creation of a national labor

organization, under the National Labor Relations Act, as an option for (a) employed physicians, and (b) residents and fellow physicians who are authorized under current law to collectively bargain.

- Continued support for the development of independent housestaff organizations for residents and fellow physicians.
- An additional directive that the AMA be prepared to move ahead with a national labor organization in the event the National Labor Relations Board gives residents and fellows approval to collectively bargain under the National Labor Relations Act.
- Continued vigorous support for antitrust relief for physicians and medical groups and the creation of a national organization to support development and operation of local negotiating units. These units would provide an option for self-employed physicians and medical groups consistent with the provisions of

the Quality Health Care Coalition Act of 1999 (H.R. 1304) introduced by Tom Campbell (R-CA.), or similar federal legislation, when enacted.

- A call for the AMA to work aggressively for antitrust relief with the U.S. Department of Justice and the Federal Trade Commission and for the AMA to help state medical associations achieve their own "state-action doctrine" legislation.
- Approval for expansion of the AMA's private sector advocacy programs, including initiating litigation, stopping egregious health plan practices and helping physicians level the playing field with health care payors.
- Authorization for programs to educate members and non-members of the possible limit on benefits and the risks to the formation of a national labor organization, concurrent to its creation.

"We will waste no time in turning the delegates' mandate into reality," said Randolph D. Smoak, Jr., MD, AMA president-elect, following the vote by the House of Delegates.

Dr. Smoak said the new labor organization will not be a traditional labor union. "Doctors will not strike or endanger patient care," Dr. Smoak said. "We will follow the principles of medical ethics every step of the way. No other organization can make that promise to the patients of America—and keep it. Our objective here is to give America's physicians the leverage they now lack to guarantee that patient care is not compromised or neglected for the sake of profits."



*OSMA Alternate Delegate and Speaker of the Oklahoma House of Delegates Bruce Storms, MD, Chickasha (right), was one of four Oklahoma physicians who participated in the AMA's Hometown Radio Program while attending the Chicago meeting.*

## AMA Election Results

The following individuals were elected to positions within the AMA during the recent annual meeting in Chicago:

### President-Elect

Randolph D. Smoak, Jr, MD

### Speaker, House of Delegates

Richard F. Corlin, MD

### Vice-Speaker, House of Delegates

John A. Knoté, MD

### Trustees

Duane M. Cady, MD

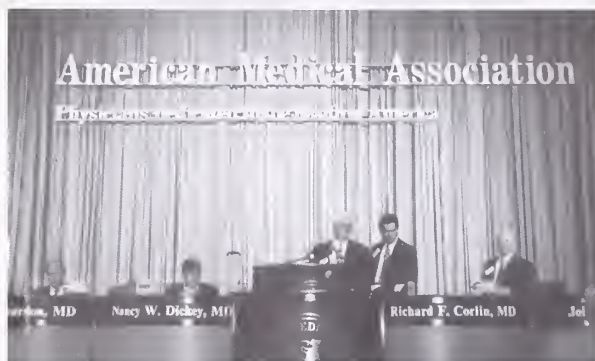
J. Edward Hill, MD

D. Ted Lewers, MD

Donald J. Palmisano, MD, JD

Joseph A. Riggs, MD

Liana Puscas, MD (Resident Position)



*Richard F. Corlin, MD, presided over the 200<sup>th</sup> meeting of the AMA House of Delegates and was elected to another term as Speaker of the House.*

## OSMA and OSMA Alliance Represented at AMA Annual Meeting

Oklahoma's delegation to the AMA gathered for a photo during the OSMA Annual Meeting. Pictured are: (front row, left to right) Barbara Hastings, MD; Jay Gregory, MD; Mary Anne McCaffree, MD; Gary Strebel, MD; Susan Harmon, MD; (back row, left to right) Jack Beller, MD; Carl Hook, MD; William H. Hall, MD; Bruce Storms, MD; David Harper, MD; Norman Dunitz, MD; Perry Lambird, MD; William G. Bernhardt, MD; Frank Phelps, MD; and Mukesh Parekh, MD. Not pictured is Greg Ratliff, MD.



The OSMA Alliance was represented by: (top row, left to right) Jan Storms, Chickasha; Linda Leemaster, Norman; Susan Paddack, Ada; Diane Cooke, Oklahoma City; Cheryl Baker, Edmond; (bottom row, left to right) Sandra Hook, Norman; Mary Ann Couch, Muskogee.

## AMA Annual Meeting Information Available Online

The AMA's Web site provides information on the June 1999 Annual Meeting, including reports and resolutions, speeches, and news. This information can be found at <http://www.ama-assn.org/meetings/public/annual99/annual99.htm>.

## Highlights from the AMA/AMAA Annual Meeting



*Diane Cooke, OSMMA immediate past president, introduces Susan Paddack, Ada, during the AMAA's installation of officers. Paddack is the national organization's new president-elect.*



*Chairman of the OSMA Delegation, Jay Gregory, MD, of Muskogee, visits with AMAA President-Elect Susan Paddack, of Ada, during the AMA Annual Meeting.*



*Boyd Whitlock, MD, and his wife Myrna and Carl Hook, MD, and his wife Sandra pause for a photo during the AMA Annual Meeting.*

A complete report of the actions taken on the Resolutions submitted by the OSMA will be printed in an upcoming issue of the *Journal*.



*OSMA Delegate Mary Anne McCaffree, MD, greets a guest at the Oklahoma reception held during the AMA Annual Meeting.*

## Selby Honored by University of Oklahoma College of Medicine



George B. Selby, MD, recently received the Humanism in Medicine Award from the faculty board of the OU College of Medicine. The newly-established award is presented to a faculty member and a graduating senior to promote humanism in the delivery of care to patients and their families by the Foundation for Health Care of New Jersey.

Selby has been an OU faculty member since 1986, and received both his undergraduate and medical degrees from OU.

## Andrews to be President of National Commission

M. Dewayne Andrews, MD, editorial board member of the *Journal* and the OU David Ross Boyd professor of medicine, was elected president of the National Commission on Certification of Physician Assistants.

Dr. Andrews has been a member of the commission's board of directors since 1995 and will begin his term as president next year.



## Whittington Named Physician of the Year by Specialty Organization



Kenneth W. Whittington, MD, of Bethany, was named the Oklahoma Academy of Family Physicians' **Physician of the Year**. Richard L. Boothe, II, MD, immediate past president, presented the award.

Dr. Whittington has practiced in Bethany since receiving his medical degree from the University of Oklahoma College of Medicine in 1968, and has served as chief of staff at Bethany General Hospital and Deaconess Hospital.

## Reichlin Promoted to Vice President of Oklahoma Medical Research Foundation

On July 1, Morris Reichlin, MD, became vice president for research for the Oklahoma Medical Research Foundation (OMRF). He assumes responsibility for 10 research programs at OMRF: Arthritis



and Immunology, Cardiovascular Biology, Clinical Pharmacology, Developmental Biology, Free Radical Biology and Aging, Immunobiology and Cancer, Molecular and Cell Biology, Molecular Immunogenetics, Protein Crystallography and Protein Studies.

Dr. Reichlin is prominent in the medical and scientific communities for his work in the area of arthritis, lupus and other autoimmune disorders. He developed the definitive diagnostic test for systemic lupus erythematosus, commonly referred to as the "Reichlin Profile."

Dr. Reichlin holds the Ben C. and Addie Mae Wileman Chair in biomedical research at OMRF. His prior position as member and head of the Arthritis and Immunology Research Program is being filled by John Harley, MD, PhD.

Dr. Reichlin is a George Lynn Cross research professor at the University of Oklahoma Health Sciences Center and will serve as liaison to the OUHSC in campus-wide core laboratory planning and supervision.

## Calhoon Honored by the OU Department of Family and Preventive Medicine

Ed L. Calhoon, MD, a family physician and surgeon in Beaver, was recently honored by the University of Oklahoma Department of Family and Preventive Medicine. The Family Medicine Center, completed in 1994, was built during Dr. Calhoon's six-year term with the Oklahoma State Regents for Higher Education.

Dr. Calhoon is credited with playing an integral role in making the facility a reality.

"This Family Medicine Center and the health care and training it provides is in major ways the result of Dr. Calhoon's dedication and example," said Steven Crawford, MD, interim chair of the OU Department of Family and Preventive Medicine, during the June 23<sup>rd</sup> reception and dinner held in his honor at the University of Oklahoma Family Medicine Center on the OU Health Sciences Center Oklahoma City campus.



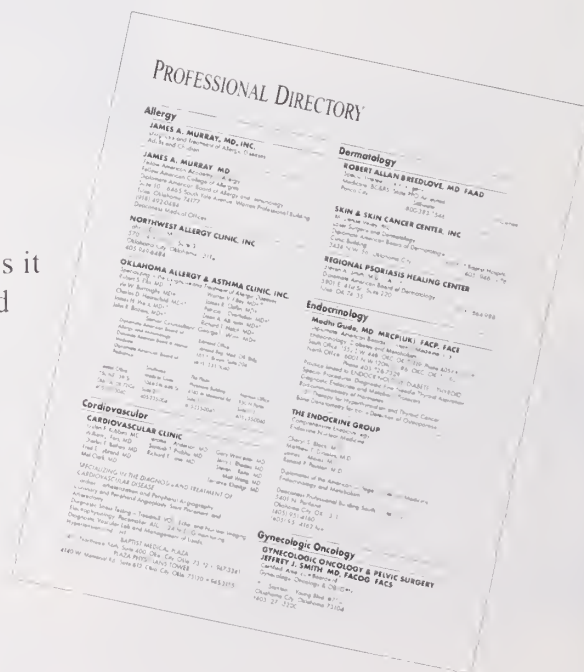
Ed Calhoon, MD, of Beaver (center), unveils a plaque bearing his likeness. Shown are (left to right) Jerry Vannatta, MD, dean of the OU College of Medicine; Donald B. Halverstadt, MD, chairman of the OU Board of Regents; Dr. Calhoon; Hans Brisch, chancellor of the Oklahoma State Regents for Higher Education; and Steven Crawford, MD, chair of the OU Department of Family Medicine.

## What's your specialty? Would you like referrals?

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## OBITUARIES



### Thomas Ross Ahrend, MD 1940-1999

Thomas Ross Ahrend, MD, died May 23, 1999. He was born August 22, 1940 in Ada and received his medical degree from the University of Oklahoma School of Medicine in 1966. From July 1971 to July 1973, Ahrend served in the US Navy, reaching the rank of lieutenant commander; he also served active duty in the Army Reserve during Operation Desert Storm. He was a member of the American College of Surgeons, the East Central University Alumni Board, and the Oklahoma State Medical Association.

## IN MEMORIAM

### 1998

|                                 |              |
|---------------------------------|--------------|
| Paul L. Masters, MD .....       | August 6     |
| Douglas D. Leatherman, MD ..... | August 21    |
| Richard E. Carpenter, MD .....  | August 30    |
| Henry J. Freede, MD .....       | September 9  |
| Chester K. Mengel, MD .....     | September 14 |
| Leaford Thornbrough, MD .....   | September 27 |
| Alfred A. Hellams, MD .....     | October 4    |
| Sumner Y. Andelman, MD .....    | October 6    |
| Eric B. Meador, MD .....        | October 10   |
| Vance A. Bradford, MD .....     | October 23   |
| Joseph S. Raff, MD .....        | November 12  |
| Herbert J. Forrest, MD .....    | November 14  |
| Joseph N. Mitchell, MD .....    | December 23  |

### 1999

|                                |            |
|--------------------------------|------------|
| Thomas Edward Rhea, MD .....   | January 2  |
| H. Ben Yagol, MD .....         | January 19 |
| Fay Knickerbocker, MD .....    | February 6 |
| Ramon G. Blanco, MD .....      | March 5    |
| Neal A. Pickett, Jr., MD ..... | March 14   |
| Henry D. Wolfe, MD .....       | March 29   |
| Winfred L. Medcalf, MD .....   | April 1    |
| Robert P. Dennis, MD .....     | April 6    |
| Emil F. Stratton, MD .....     | April 7    |
| Carl W. Smith, Jr., MD .....   | April 8    |
| George L. Hill, MD .....       | April 20   |
| Jim M. Taylor, MD .....        | April 28   |
| T. Jeff Williams, MD .....     | May 17     |
| Thomas Ross Ahrend, MD .....   | May 23     |

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## LETTERS TO THE EDITOR

### TO THE EDITOR:

Thank you very much for profiling my uncle in your article "Dr. Kelly West and a Brief History of the Diabetes Epidemic of American Indians" (Green R. Dr. Kelly West and a brief history of the diabetes epidemic of American Indians. *J of OSMA* 1999; 92(5): 278-284). It continues to amaze me how much his presence is still felt nearly 20 years after his death.

As luck (and genetics) would have it, my life has followed a similar path, but without the tremendous accomplishments of my uncle. I am a physician who trained in internal medicine, but have been unable to practice for the past decade due to a serious environmental illness. I have become involved in advocacy related to environmental health issues which has included working with the New Mexico Department of Health to obtain statistics among Native Americans which showed that about a third of the respondents reported being unusually sensitive to common everyday chemicals. Since then, our group has started working with the environmental officer in the Taos pueblo on the possibility of getting an EPA grant to educate Indians about environmental hazards. So I, too, have stumbled on to epidemiology and my focus now includes Native American health.

It wasn't until I read your article that I fully understood what my uncle had been working on and I was struck by how much we had in common, not the least of which is having my workaholicism fueled by the need to live each day as if it might be my last in case my health declines precipitously. I so wish he were alive today so we could discuss these things.

It's quite remarkable that my family and I even found out about your article. My aunt and mother (Kelly's two remaining sisters) happened to be in Oklahoma City the week the article was published (they live in California and Texas) and ran into an old friend of theirs who got the Oklahoma State Medical Association *Journal*. She thumbed through it and found the article and showed it to my mom and aunt. So, hot off the presses, they made copies and sent them to lots of friends and family members, including me. Thanks again for your wonderful article.

Ann McCampbell, MD  
Santa Fe, NM

### TO THE EDITOR:

Just a note to let you know how much I enjoyed your Perspective on my classmate, Kelly West. It was done in an excellent, very readable style and brought back lots of good memories of my medical school days.

Kelly's dad, W. Kelly West, did some hand surgery on my mother-in-law in the 1940s and we all remembered him as a very gentle man.

Kelly was probably known better around the world, especially in the diabetes world, than he was known in Oklahoma. He was an epidemiologist before anyone, including Kelly, knew that there was such a specialty. He made me conscious of the "thrifty gene." Everyone involved in diabetes research knew Kelly and had a profound love and respect for the man. I think that your article beautifully summarized his life and accomplishments and was a real tribute to him.

Your Perspective on Kelly was great. A wonderful summary of a life well lived. I enjoyed reading it and it will go with my other medical school memories. Thanks.

Robert K. Endres, MD  
Bixby

**LETTER TO THE EDITOR**  
submissions may be directed to:

**J. Michael Pontious, MD**  
Editor-in-Chief

via e-mail:  
[michael-pontious@ouhsc.edu](mailto:michael-pontious@ouhsc.edu)

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## FROM THE OKLAHOMA STATE DEPARTMENT OF HEALTH

### LYME DISEASE VACCINE NOT RECOMMENDED FOR OKLAHOMANS

Kristy Bradley, DVM, MPH; Michael Crutcher, MD, MPH

*A vaccine is now available to prevent Lyme disease (LYMERix™, SmithKline Beecham Pharmaceuticals). The LYMERix™ series is labeled for use in persons aged 15-70 years old and consists of three doses administered over 12 months. Clinical trials demonstrated a vaccine efficacy of 49 percent after the second dose and 76 percent following the third dose.*

#### ACIP Recommendations

Recommendations by the Advisory Committee on Immunization Practices (ACIP) for the use of Lyme disease vaccine have been published [MMWR 48(RR07):1-17]. The ACIP advises tailoring vaccine use to the geographic location of residence, work or recreation. Geographical risk is determined by the presence of *Ixodes* tick vectors and the prevalence of tick infection with *B. burgdorferi*. *Ixodes scapularis* is found in eastern Oklahoma; however, the *B. burgdorferi* infection rates are much lower in the South. Lyme disease vaccination is not recommended for persons who reside, work, or recreate in low or no risk areas of the country. The ACIP guidelines classify Oklahoma as a low or zero risk area.

#### Lyme Disease in Oklahoma

Although Lyme disease is reported in Oklahoma (an average of 52 cases/year for 1994-98), it is significantly over-diagnosed because initial positive screening tests are rarely confirmed with the more specific Western immunoblot test as recommended. Oklahoma infectious disease experts report diagnosis of true Lyme disease is rare.

Controversy exists as to whether the "Southern Lyme-like disease" described in the South is the same as true Lyme disease. This controversy is based on the fact that *B. burgdorferi* has never been isolated from a human case having tick exposure in a southern state. A rash similar to the erythema migrans of Lyme disease is reported in patients in the South. The etiology of this condition is unclear but may be caused by one or more different organisms.

#### Recommendations

The Oklahoma State Department of Health (OSDH) concurs with the ACIP recommendations. LYMERix™ is **not recommended** for Oklahoma residents regardless of occupational or leisure activities. Vaccination may be considered for persons planning to travel to a hyperendemic area who will have prolonged exposure to tick habitat.

Oklahoma has high rates of Rocky Mountain Spotted Fever, ehrlichiosis, and tularemia. The best means of protection against tickborne disease is personal preventive measures. Fact sheets for your patients on identification of ticks and prevention of tickborne disease may be found on the Communicable Disease Division (CDD) web pages at [www.health.state.ok.us/program/cdd/other.html](http://www.health.state.ok.us/program/cdd/other.html). Additional information on ticks and tickborne disease in Oklahoma has recently been published in *The Journal of the Oklahoma State Medical Association*, Vol. 19, No. 8, Nov 1998. The ACIP guidelines may be accessed online at [www.cdc.gov](http://www.cdc.gov). For more information, contact the OSDH CDD at (405) 271-4060.

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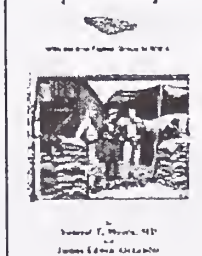
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Integrus Southwest Medical Center -  
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Jane Phillips Medical Center -  
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Mercy Health Center -  
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Norman Regional Hospital -  
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Orthopaedic & Reconstructive  
Research Foundation -  
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St. Anthony Hospital -  
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Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

Valley View Hospital  
Ada

### Course offerings from OSMA Accredited Institutions

#### Baptist Medical Center - Donna Schoenfelder - 405-949-3284

|                  |                               |        |            |
|------------------|-------------------------------|--------|------------|
| August 6, 20, 27 | Tumor Board                   | 7:00am | 1 hour ea. |
| August 9         | Skin Cancer - Med. Dept.      | 7:00am | 1 hour     |
| August 10        | "Pediatric Sleep"             | 7:00am | 1 hour     |
| August 13        | Cancer Conference             | 7:00am | 1 hour     |
| August 17        | "Updates in Cataract Surgery" | noon   | 1 hour     |
| August 20        | Autopsy CPC                   | noon   | 1 hour     |

#### Deaconess Hospital - Cyndi Nelson - 405-604-4979

|           |  |        |        |
|-----------|--|--------|--------|
| August 16 | New Innovations in the<br>Treatment of Allergy | 6:30pm | 1 hour |
|-----------|--|--------|--------|

#### Mercy Health Center - Debbie Stanila - 405-752-3806

|                      |  |         |            |
|----------------------|--|---------|------------|
| August 5             | Learning from Experience-The<br>Physician's Role in End-of-Life Care | 12:15pm | 1 hour     |
| August 12            | Diabetic Gastropathy   | 12:15pm | 1 hour     |
| August 17            | Neuroscience Institute Lecture Series                                | 7:00am  | 1 hour     |
| August 19            | Interaction of Our Environment<br>and the Respiratory System         | 12:15pm | 1 hour     |
| August 26            | Management of COPD for Today<br>& the Next Millennium                | 12:15pm | 1 hour     |
| August 4, 11, 18, 25 | Tumor Board  | 7:00am  | 1 hour ea. |

#### Irwin Brown Office of Continuing Medical Education

##### Letricia Harris-405-271-2350

|             |   |          |
|-------------|---|----------|
| August 6-10 | 11th Annual Ob/Gyn Summer Symposium<br>Jackson Hole, Wyoming                                      | 14 hours |
| August 14   | Stroke Prevention/Treatment in New Millennium<br>Tulsa, OK  | 4 hours  |
| August 19   | Ft. Sill CME Series-"The Patient w/the Neck Mass"<br>Current Diagnostic Evaluation/Thyroid Module | 2 hours  |

#### St. Anthony Hospital - Sandy Coury - 405-272-6358

|           |  |         |        |
|-----------|--|---------|--------|
| August 2  | Medicine Grand Rounds<br>Pre-Op Cardiac Evaluations                      | 8am     | 1 hour |
| August 2  | Oncology Grand Rounds<br>Cancer Conf. Case Presentations                 | noon    | 1 hour |
| August 4  | Dept. of Women and Childrens<br>Health - Conference                      | noon    | 1 hour |
| August 5  | St. Anthony Behavioral Medicine<br>Share "Disruptive Behavior Disorders" | 11:45am | 1 hour |
| August 9  | Oncology Grand Rounds<br>Speaker To Be Announced                         | noon    | 1 hour |
| August 16 | Oncology Grand Rounds<br>Cancer Conference Case Presentations            | noon    | 1 hour |

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator, at 405-843-9571.*

## A Special Look at the 1999 AMA Alliance National Meeting



*Cheryl Baker  
President, OSMA Alliance*

---

Excellence Within the  
Heart of Our Community:  
The OSMA Alliance.

"It is fitting that we don't  
have to look far to see  
evidence of this excellence.

There are no better  
examples in our Oklahoma  
community than Susan  
Paddack and Barbara Jett."

---

On June 22, 1999, the AMA Alliance House of Delegates convened for the 76th Annual Session at the Drake Hotel in Chicago. Alliance members from across the country assembled to network, exchange information on health and legislative issues and address issues of concern to medical families. Business as usual—or so it would seem.

However, what made this Annual Meeting unique was the installation of Susan Paddack from Ada, Okla., as the president-elect of the American Medical Association Alliance for 1999-2000. OSMA Alliance immediate Past President Diane Cooke introduced Susan. Delegates to the AMA were present, in addition to members of the OSMA staff.

Susan's husband, Gary, and son, Geoffrey, were also present. It was the highlight of the meeting for the Oklahoma delegation and a joyous time for all present. Congratulations to Susan on this well-earned achievement.

This occasion is significant in that it marks only the second time an Oklahoma Alliance member has represented our organization at the national level.

Sherry Strebel of Oklahoma City was the first member to hold that distinction when she was inaugurated as president of the AMA Alliance in June 1991. Coincidentally, this was the same year that Susan was president of the Oklahoma State Medical Association Alliance.

Susan will represent our state and our organization with the same unique qualities with which she approaches all challenges in life. Her energy, enthusiasm and scope of knowledge are evident to all who know her. There is no one more capable or better prepared for this job than Susan.

My theme for the year is "Excellence Within the Heart of Our Community: The OSMA Alliance." It is fitting that we don't have to look far to see evidence of this excellence. There are no better examples in our Oklahoma community than Susan Paddack and Barbara Jett of Oklahoma City.

Barbara has been appointed to serve as the chair of the AMA Foundation Committee for the 1999-2000 year. The AMA Foundation has awarded more than \$75 million to support the Medical Students Assistance Fund and the Medical Student Excellence Fund. This is the first year that a new service component has been added. Physicians and medical students are now recognized for exceptional contributions to the health and well-being of their patients, their communities and our nation.

It is with great pride that OSMA Alliance members recognize the achievements of both Susan and Barbara. This year promises to be exciting for all OSMA Alliance members as we work and support both the new AMA Alliance president-elect as well as all of our county and state leaders. In the words of Margaret Mead, "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has."

# THE LAST WORD

## **Oklahoma Centralized Verification Organization Offers Assistance**

For practitioners who are asked to obtain a self-query from the National Practitioner Data Bank (NPDB) in order to apply for or retain their affiliation with certain health care organizations, the Oklahoma Centralized Verification Organization (OCVO) can help.

The NPDB now requires that a credit card be used to pay for this query, and some physicians are hesitant to use their credit card in this manner. The OCVO can now make self-queries to NPDB on behalf of a practitioner; the NPDB sends the results directly to the physician by mail.

OCVO charges \$20 for this assistance, which includes the self-query fee to the NPDB. Contact OCVO at 800/340-6070 or 918/971-5848 for more information.

## **AMA President Says Senate Version of Patient's Bill of Rights Doesn't Go Far Enough**

After the Senate vote on the Patient's Bill of Rights in mid-July, AMA President Thomas R. Reardon, MD, made the following statement: "The AMA is deeply disappointed that a slim majority of the U.S. Senate has decided to deny the American public the fundamental right to the health care they need when they need it. In a highly regrettable action, the Senate has bowed to the insurance industry dictate that says their profits come first and patients come last."

He went on to say that the American public would insist that Congress reject the current version and demand certain rights for patients including:

- the right to an independent and fair external appeal of health plan decisions
- the right to hold health plans accountable when their decisions harm patients
- the right to have physicians decide what treatment is medically necessary
- the guarantee that these rights apply to all Americans.

"The AMA has been fighting for these protections for our patients for five years," Dr. Reardon said. "Our advocacy for our patients will be relentless until Congress approves the real protections our patients need."

## **OSMA Member Says Thank You**

S. Fulton Tompkins, MD, upon receiving his life membership from the Oklahoma State Medical Association, sent a thank you letter to the OSMA. In part it reads:

"Thank you...for the very nice certificate of life membership in OSMA. It has been both a pleasure and privilege for me to have been a member of this organization since I first came to the state in 1950. My best wishes go to both current and future members of the OSMA, along with the hope that the current problems in the delivery of health care can eventually be worked out to the benefit of all concerned."

## **Vital Records Office Adjusts Hours for Back-to-School Rush**

The Oklahoma State Department of Health in Oklahoma City is offering extended hours to meet the back-to-school rush. From now until Sept. 16, the office will be open until 8 p.m. every Thursday evening. Normal hours of operation are 8:30 a.m. to 4 p.m.

The Vital Records office is located at 1000 NE 10 Street on the first floor of the Oklahoma State Department of Health.

To obtain a copy of a birth certificate, applicants will need to provide a date of birth, place of birth, parents' names and furnish a photo identification. Each certified copy of a birth certificate is \$5.00.

## **Dates to Remember**

Dates have been set for the next four OSMA Board of Trustees meetings; they are as follows:

**August 29, 1999**

Tulsa - Health Sciences Center

**November 14, 1999**

Oklahoma City - OSMA Headquarters

**February 6, 2000**

Oklahoma City - OSMA Headquarters

**April 27, 2000**

Oklahoma City - Westin Hotel

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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION  
SEPTEMBER 1999



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Evan M. McMillan, MD, Oklahoma City

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# JOURNAL

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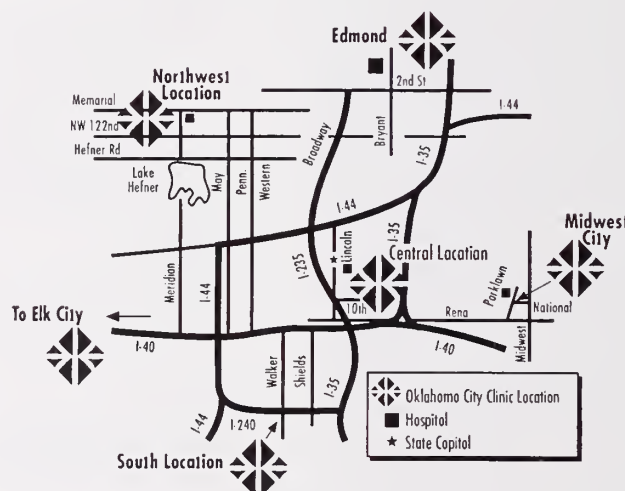
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## On the Making of a Journal

I have had three months to learn the ropes. Editors of medical journals are fading fast. They seem to have problems keeping their jobs. By the very nature of their work, they are at risk. Physician editors are probably more at risk than most; by our very nature, we are strident and hard-headed, obstinate and cantankerous, opinionated as well as focused.

In a way I would want all of those things said about me. They are awards worn with pride.

But that is not the entirety when it comes to editor work. Some of the time you must come back to the basics and make sure that your reality-testing is appropriate—that your readership understands the focus, techniques and plans that this form of communication offers.

A recent survey of the membership of the Oklahoma State Medical Association reveals that 50 percent of the members believe that the *Journal* is a useful form of communication. This compares with 75 percent of the membership preferring the OSMA Newsletter as a useful source of information. The OSMA web page fell to a distant third for the membership.

My first response was that this preference was dictated by the speed with which we live our professional lives. "Give me the facts, just the facts..." is the mindset that we take with patients and, subsequently, with the information disseminated by the OSMA. One cannot fight the fact that the OSMA Newsletter is compact, to-the-point and timely. Are we to assume that the *Journal* lacks that appeal to the readership?

On second thought, the answer might be a bit different. I, for one, don't want to assume that the days of scientific journals are over.

I believe it is the responsibility of the OSMA to provide a forum for original medical work that has been generated in our state. We have a grand tradition of providing this forum; we need to continue this tradition. Many other state societies have gone to a news- and article-based publication.

The *Journal* also serves to provide general medical education to its readership in the form of clinical reviews, updates and information pieces that are available from national and state health organizations. The *Journal* provides an appropriate mechanism to get these messages into the hands of the physicians of this state. It is intuitive that this would be a major focus of the *Journal*.

But therein lies the rub...physicians must be willing to pick up the *Journal*. Those physicians must be willing to scan the table of contents, pick out the articles of interest, search the abstract, and decide that reading the article is worth their time. We are attempting to use the "build it and they will come" mentality when it comes to enticing Oklahoma's physicians to utilize the *Journal* in their monthly medical reading.

Is that a naïve plan?

We, as a community of practicing physicians, need to communicate. In the past couple of months I have used a rather strident style in this editorial space in an attempt to get a response from the readership of the *Journal*. Just because I have the "bully pulpit" does not mean that I have a corner on truth. Responses that express opposing opinions or perspectives are needed to truly communicate. It is not a difficult chore to put those perspectives down on paper or in an e-mail and ask that they be included in the *Journal*.

**"Everyone  
hears only  
what he  
understands."**

**Goethe**

In addition, there are some ideas for new columns that will be showing up in your monthly *Journal*. Here is a partial list of the ideas being considered:

- Medical Computing and Internet Links of Interest – with annotation
- Practice Management series – looking at management issues in clinical practice
- PEARLS (before swine?) – utilizing a series of local reviewers to scan the medical literature on a monthly basis and distill this into a useful format for the practicing clinician
- Grand Rounds (CPC)– A series from the University of Oklahoma Departments of Internal Medicine, Pathology and Radiology
- An Oklahoma version of “A Piece of My Mind” – clinical stories of human interest.

This is not an all-inclusive list, but sets the groundwork for the type of material that you will be seeing in the *Journal* over the next few months.

One of the things that your editorial board needs to hear from the membership is new ideas or comments on the current material that is being published on a monthly basis. Many of you have commented favorably on the “Leaders in Medicine” series; we will continue this series. We will continue to include timely material from the Oklahoma State Health Department and from the OSMA.

There are other areas in which the readership can assist the editorial board in this endeavor.

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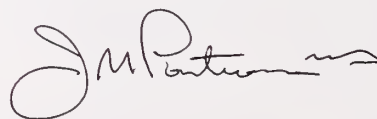
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# PRESIDENT'S PAGE

## Quality of Patient Care

A recent television news program interviewed an anesthesiologist who was charged with a criminal offense after he delayed in making a proper diagnosis in an emergency situation. The child died.



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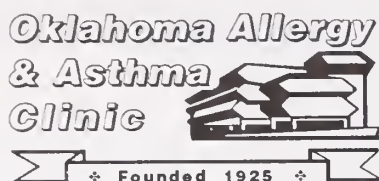
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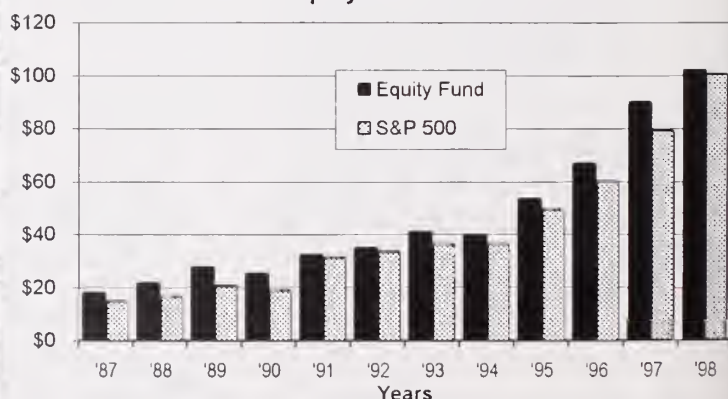
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## 18-Fluorodeoxyglucose Imaging in Oncology

Jay A. Harolds, MD

This article describes the use of 18-fluorodeoxyglucose (FDG) scans for the diagnostic evaluation of cancer patients. Since FDG is a positron emitting radio-pharmaceutical, a dedicated Positron Emission Tomography unit (PET) or a hybrid PET/SPECT (single photon emission computed tomography) unit is required for oncologic studies. As PET and PET/SPECT scanners become available to perform these images, it is important that knowledge regarding the usefulness of these images, and their limitations, be disseminated to health care providers. There are evolving uses of FDG scans; current use includes staging patients with non-small cell carcinoma of the lung, malignant melanoma, Hodgkin's disease, non-Hodgkin's lymphoma, colorectal carcinoma, and head and neck carcinoma.

### Introduction

The introduction of PET or PET/SPECT scanners into the clinical environment has allowed for enhanced imaging which utilizes the radiopharmaceutical 18-fluorodeoxyglucose. Although there are many ways this equipment can help evaluate clinical patients, the initial use will be in staging patients with non-small cell carcinoma of the lung, malignant melanoma, Hodgkin's disease, non-Hodgkin's lymphoma, colorectal carcinoma, and head and neck carcinoma. This article focuses on the utility of FDG imaging in the oncology patient.

### Discussion

#### Physics, Patient Preparation and Instrumentation

FDG is a radioactive sugar analogue which has no known patient side effects, except for the theoretical effect from radiation similar to that of other nuclear medicine procedures. Since FDG is

not the same as glucose, it has the ability to remain in cells for a prolonged period of time, enhancing its ability to be imaged. In the setting of elevated patient blood glucose levels ( $> 200$  mg/dl), reduced uptake of FDG is noted. Uptake of FDG can be improved by requiring that the patient take nothing by mouth for six hours prior to the study. Diabetics should not have insulin for at least two hours and preferably four hours before the test, unless it is required to keep their blood glucose level below 200 mg/dl. Insulin may be utilized to decrease the blood glucose, but this increases muscle uptake of FDG.<sup>1,2</sup>

The fluorine (F)-18 component of FDG decays by emitting a positron, a positively charged electron, that immediately combines with an electron, converting to two 511 Kev photons traveling 180° apart. If these two photons reach opposed detectors within 12 nanoseconds, they can be assumed to be from the decay of one nucleus of F-18. Utilizing this phenomena, the PET or PET/SPECT scanner has better resolution and count rate than that obtained by less advanced equipment.

The first FDG imaging device used in Oklahoma was a dual detector hybrid PET/SPECT (single photon emission computed tomography) unit. This unit can produce axial, coronal, and sagittal images of FDG. It can also be utilized in a different mode to image non-positron emitting radio pharmaceuticals.

Alazraki states that the inherent high resolution of these camera systems is 4 to 6 mm for coincidence imaging, at least as good as PET systems.<sup>3</sup> However, this is a reference to laboratory conditions. In imaging the actual patient, the decreased count rate capability of hybrid PET/SPECT could potentially adversely affect lesion detection for very small tumors. Hybrid PET/SPECT equipment uses a much larger field of view and the imaging is done for a longer amount of time to

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**Table 1. Factors Affecting FDG/PET Imaging**

|                                      |
|--------------------------------------|
| Uptake of FDG by tumor               |
| Location of tumor                    |
| Experience of interpreting physician |
| Time from FDG injection              |
| Patient ability to lay still         |
| Appropriate patient preparation      |
| Technologist experience              |
| Instrument quality                   |

**Table 2. Patz<sup>8</sup> Findings for Bronchogenic Carcinoma**

|   | Sensitivity | Specificity |
|---|-------------|-------------|
| FDG PET for hilar/lobar lymph node metastases | 73%         | 76%         |
| CT for hilar/lobar lymph node metastases      | 27%         | 86%         |
| FDG PET for mediastinal node metastases       | 92%         | 100%        |
| CT for mediastinal node metastases            | 58%         | 80%         |

compensate for this. For dedicated and hybrid PET systems, lesion detection depends on many factors (see Table 1). Optimization of the accuracy can be achieved by review of other radiographic studies and clinical information.

There are a number of new developments in PET imaging. Under evaluation are intraoperative devices that are hand-held and can detect occult disease in the operating room. In addition, development is underway for fusion imaging for modalities such as PET, CT, and MR. In fusion imaging, various studies can be electronically superimposed, allowing for better correlation and interpretation. A more direct approach is the new development of a hybrid PET/CT scanner.

### Clinical Applications

FDG imaging is theoretically useful in many conditions, including the evaluation of dementia, epileptic foci, and assisting in evaluation of damaged myocardium. The focus of this paper is limited to the use of FDG imaging in the evaluation of the oncology patient.

### Staging Carcinoma of the Lung

The Health Care Financing Administration has approved FDG imaging for the staging of small cell carcinoma of the lung, as well as the evaluation of single pulmonary nodules. There are numerous studies which show that FDG PET scanning is more accurate than Computerized Axial Tomography (CT) for this purpose. Steinert et al<sup>5</sup> demonstrated in 47 patients with known or suspected non-small carcinoma of the lung that metastatic disease was identified more

frequently in FDG PET scans when compared to CT evaluation of the same patient. In the Steinert study the FDG PET scan had a sensitivity of 89 percent and a specificity of 99 percent, compared to the CT sensitivity of 57 percent and specificity of 94 percent. Other comparison studies have demonstrated similar sensitivity and specificity for FDG PET scanning.<sup>5</sup>

In an analysis of eight articles which dealt with the staging of non-small cell lung cancer from 1994-1997, Lowe<sup>6</sup> reports the total sensitivity of PET was 88 percent and CT was 63 percent. The specificity of PET was 91 percent and CT was 76 percent. VonSchulthess<sup>7</sup> also found FDG imaging cost effective for non-small cell lung cancer, as it avoided unnecessary thoracotomy, in about 10 percent of cases.

For bronchogenic carcinoma, Patz<sup>8</sup> found the following in a series of 42 patients (see Table 2).

### Evaluating the Solitary Pulmonary Nodule

FDG PET scanning has also been used to evaluate the solitary pulmonary nodule.<sup>9</sup> For 89 patients with indeterminate pulmonary nodules by CT:

|                   | Sensitivity | Specificity | Accuracy |
|-------------------|-------------|-------------|----------|
| < 1.5 cm diameter | 100%        | 74%         | 85%      |
| All sizes         | 98%         | 69%         | 89%      |

In a review of three studies,<sup>10</sup> Valk found a variation from 80 to 100 percent for PET specificity of the solitary indeterminate pulmonary nodule. He attributes this partly due to the prevalence of histoplasmosis in different geographic regions. Gambhir<sup>11</sup> found for the solitary pulmonary nodule:

|          | Sensitivity | Specificity |
|----------|-------------|-------------|
| FDG PET  | 93%         | 83%         |
| Chest CT | 99%         | 61%         |

Indications in which to consider FDG imaging when evaluating a pulmonary nodule include a patient who is reluctant to undergo an invasive procedure, a high-risk patient (advanced age, severe emphysema, bleeding problems, etc.), or a prior inconclusive biopsy.<sup>12</sup>

In the lung, abscess, pulmonary infection, inflammation, and old granulomatous disease may cause false positive results. It is advisable to wait one to two weeks after a biopsy or thoracic surgery procedure to image the patient, as the procedures can cause a false positive result.

### Head and Neck Carcinoma

Wong<sup>13</sup> found PET scanning in head and neck carcinoma had a sensitivity of 67 percent and a specificity of 100 percent. For CT/MR it was 67

percent and 25 percent, respectively. Conti<sup>14</sup> found PET to have a sensitivity of 87 percent in distinguishing scar from recurrent head and neck carcinoma. Laubenbacher et al<sup>15</sup> found a sensitivity and specificity of PET for head and neck carcinoma nodal disease to be 90 percent and 96 percent, but for MR it was 78 percent and 71 percent, respectively. PET detected the true nodal metastasis (N) stage in 15 out of 17 patients. MR gave the true N stage in only four of 17.

The patient should not clench his teeth or chew gum during the head and neck scanning procedure as this may cause increased uptake of the FDG in the musculature. Usually this uptake is elongated and characteristic, but can be misinterpreted as a positive node.

### Thyroid Cancer

FDG PET imaging has been disappointing in the detection of primary thyroid carcinoma, although it is useful in detecting metastatic anaplastic or medullary carcinoma. It is also useful to detect metastatic papillary-follicular carcinoma when the I-131 whole body metastatic survey scan after thyroid ablation is negative and the thyroglobulin is > 7 nl/ml. Conti<sup>5,14</sup> found after thyroid ablation, the sensitivity for detection of thyroid metastases was:

|              |      |
|--------------|------|
| PET          | 100% |
| Thallium-201 | 33%  |
| I-131        | 75%  |

The FDG scan can be done with the patient on thyroid suppression.

### Colorectal Carcinoma

Schiepers<sup>16</sup> reported the accuracy of detecting local recurrent colorectal carcinoma for PET was 95 percent whereas for pelvic CT it was 65 percent. FDG imaging had an accuracy of 98 percent for identifying liver metastases while CT/Ultrasound imaging had an accuracy of 93 percent. Schiepers et al<sup>16</sup> also found unanticipated metastases outside the liver in 10 out of the 76 patients, in 14 different sites by PET. Other authors have reported on the value of FDG PET imaging in improving the clinical management of patients with recurrent colorectal cancer.<sup>17-19</sup> Furthermore, one in six patients also had unsuspected recurrent disease found by 18-FDG imaging, resulting in modification of surgical approach in one in four patients.

Valk discussed a study of 78 patients<sup>20</sup> who seemed to have a solitary recurrent colorectal tumor amenable to surgical excision after CT evaluation. FDG PET scanning found a nonresectable tumor in 32 percent of these patients.

### Ovarian Cancer

Smith<sup>21</sup> found PET had a sensitivity of 94 percent and a specificity of 96 percent for detecting recurrent ovarian cancer. For CT the sensitivity was 85 percent with a specificity of 76 percent.

### Carcinoma of the Prostate

FDG PET is less valuable than the bone scan for evaluating prostatic bone metastases. Also it is not helpful to distinguish prostatic hyperplasia from prostate carcinoma. It remains to be defined how useful FDG PET is for finding metastatic prostate carcinoma in lymph nodes.<sup>22</sup> It is also difficult to visualize a bladder carcinoma because of normal urinary excretion of FDG by the kidneys, although some work has shown that bladder irrigation may be helpful.

### Brain Imaging

The patient who has changes on CT or MR post treatment (radiation or surgical) often presents a dilemma for the clinician. These changes may be secondary to previous treatment or recurrent tumor. FDG PET scanning may present an extremely sensitive diagnostic alternative. de Wit<sup>23</sup> evaluated lymphoma patients with a residual mass after therapy to distinguish between necrotic tissue and viable residual tumor. The sensitivity of CT was 85.7 percent and for PET it was 100 percent. The specificity of CT was 3.7 percent and for PET it was 73 percent.

In the evaluation of metastatic disease to the brain, FDG PET scanning is not as accurate as the MR or standard nuclear medicine 99m Tc MDP bone scan.<sup>24</sup>

### Malignant Melanoma

Boni<sup>25</sup> reported FDG PET scanning to be "excellent" in the staging of malignant melanoma, with a sensitivity of 91 percent. In 35 patients with suspected recurrent melanoma, the preoperative evaluation with FDG PET scanning found that there was no tumor in 20 percent, while 23 percent had previously unknown tumor making the malignancy unresectable.<sup>20</sup> FDG PET imaging in a series of 11 patients correctly predicted the presence or absence of melanoma in all cases of nonpalpable regional lymphatic metastases.<sup>26</sup> Multiple studies have documented a high accuracy in the detection of metastatic disease in malignant melanoma.<sup>27,28</sup> FDG PET imaging is useful in evaluating melanoma when the tumor depth is 1.5 mm or greater.<sup>29</sup>

Table 3. 18-Fluorodeoxyglucose Imaging in Oncology

| Tumor                               | Sensitivity |         |      | Specificity |      | Reference Number |
|-------------------------------------|-------------|---------|------|-------------|------|------------------|
|                                     | N           | FDG PET | CT   | FDG PET     | CT   |                  |
| Lung:<br>Non-small cell             | 47          | 89      | 57   | 99          | 94   | 4-7              |
| Lung:<br>Bronchogenic (hilar)       | 42          | 73      | 27   | 76          | 86   | 8                |
| Lung:<br>Bronchogenic (mediastinal) | 42          | 92      | 58   | 100         | 80   | 8                |
| Lung:<br>Solitary Nodule            | 89          | 93      | 99   | 83          | 61   | 9-12             |
| Head and Neck                       | N/A         | 67      | 67   | 100         | 25   | 13-15            |
| Ovarian                             | N/A         | 94      | 85   | 96          | 76   | 21               |
| Brain                               | N/A         | 100     | 85.7 | 73          | 3.7  | 23,24            |
| Melanoma                            | N/A         | 94.2    | 55.3 | 83.3        | 84.4 | 20,25-29         |
| Breast                              | 35          | 96      | —    | 100         | —    | 34-36            |

If FDG PET imaging detects metastatic disease, a biopsy of that area, rather than a sentinel node biopsy, may be indicated.

### Lymphoma

FDG PET imaging is more accurate than CT in determining the extent of disease in lymphoma.<sup>30-32</sup> Hoh<sup>33</sup> found evidence that an initial FDG augmented PET study plus other diagnostic exams is a cost effective method of staging Hodgkin's disease and lymphoma. PET also seems to be more sensitive than gallium in staging Hodgkin's disease.

### Breast Cancer

FDG PET scanning offers an alternative form of evaluation for primary breast cancer in the patient with dense breast tissue. Tse<sup>34</sup> found that FDG PET correctly predicted the presence or absence of axillary breast metastases in seven out of 10 patients. In 12 of 14 patients the presence or absence of a primary breast tumor was correctly identified. The smallest tumor seen in this series was 3 × 7 × 10 mm. Nieweg<sup>35</sup> reported that the primary breast lesion was seen with FDG PET in 10 out of 11 patients. The smallest lymph node metastasis detected was 8 mm in size. Although one patient had diffusely greater activity in both breasts from fibrocystic disease, this did not interfere with detection of the malignancy.

FDG scanning of the breast for screening is cost prohibitive and would also need to compete against the sensitivity of MR and 99mTc-sestamibi imaging. In addition, many FDG PET imaging studies that have looked at breast evaluation have only considered primary disease that is greater than 1 cm.

Another possible use for FDG imaging would be to evaluate the status of the axillary

nodes in breast carcinoma metastases. In addition, FDG PET imaging in breast cancer to look for distant metastases might be considered. It is unclear what role FDG PET imaging will play in the evaluation of ongoing treatment of breast cancer. Nieweg<sup>35</sup> was unsure if the uptake was sufficiently great to be useful in assessing changes from chemotherapy. Minn,<sup>36</sup> using a gamma camera and FDG, reported a decrease in FDG uptake in tumors responding to treatment. This finding may turn out to be clinically useful in assessing the impact of chemotherapy on the patient with breast cancer.

### Summary

FDG scanning is a major advance in improving the sensitivity of imaging for many oncology patients. It is valuable in colorectal carcinoma, head and neck carcinoma, malignant melanoma, Hodgkin's disease, non-Hodgkin's lymphoma, non-small cell carcinoma of the lung and many other tumors. This field of imaging is changing rapidly. Clinically-useful imaging with FDG PET scanning will continue to be refined and improved. J

### The Author

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## **Secular Trends in the Prevalence of HIV Infection Among a Population of Males with Hemophilia, 1988-1997: The Oklahoma Hemophilia Surveillance System**

Linda D. Cowan, PhD; Leslie S. Hudson, PhD; Barbara K. Erickson, MPH; Heather C. Huszti, PhD; Barbara R. Neas, PhD; Shari K. Kinney, RN, MS; Nabih R. Asal, PhD

Tracking the natural history of HIV/AIDS in the hemophilia community is useful for planning future health care needs and for adjusting estimates of the prevalence of hemophilia as the impact of HIV/AIDS wanes over time. The present study was designed to determine the annual prevalence of HIV infection from 1988 through 1997 in a population of males with hemophilia A or B. Data were obtained from the Oklahoma Hemophilia Surveillance System and were limited to individuals who were seen at the Oklahoma Hemophilia Treatment Center.

In 1988, the prevalence rate of HIV infection was 34 percent. Rates have declined in each subsequent year through 1997. The highest rates of HIV infection were observed in persons with severe hemophilia and hemophilia A. The overall prevalence rates of HIV infection in this treatment center population are lower than those reported in other populations. No new cases of HIV infection were observed in persons with hemophilia born after 1985.

### **Introduction**

Clinical infection with the human immunodeficiency virus (HIV) was first reported in association with hemophilia in 1981,<sup>1,2</sup> although retrospective analysis of frozen serum samples from persons with hemophilia demonstrated HIV seroconversion as early as 1978.<sup>3-5</sup> From this first documented seroconversion, the prevalence of HIV infection rose steadily through the early 1980s and leveled off by the end of 1984 with approximately 75 percent of the individuals with severe hemophilia A positive for anti-HIV antibody.<sup>4,6</sup>

Reported prevalence rates of HIV infection in the hemophilia population have ranged from 40 to 83 percent.<sup>3,5,6</sup> Screening of the blood supply, which was implemented on a wide scale in 1985, and continued monitoring and treatment of blood products to inactivate HIV have resulted in reducing the risk of acquiring the infection from the infusion of blood products to near zero.<sup>5,7-9</sup> Given that, in most cases, the lag between HIV infection and detectable levels of anti-HIV antibodies is no longer than six months,<sup>10-13</sup> and the estimated median period of time between HIV infection and the onset of symptoms of AIDS is approximately 10 years,<sup>14</sup> cases of HIV infection initiated prior to 1985 in persons with hemophilia should now be evident if testing were done.

The prevalence rate of a disease is a measure of the number of existing cases in a defined population for a specified time period. This rate is a function of both the rate of new infections (incidence rate) and survival (the average duration) with the disease. Prevalence serves as a measure of the burden of the disease within a population. If no new cases of HIV infection are being incurred in the hemophilia community and the survival rate remains constant, then the prevalence of infection should decline as persons with the infection die from the acquired immunodeficiency syndrome (AIDS) and new cases of hemophilia are born. If survival increases due to improved treatment, the decline in the prevalence rate would not occur as rapidly, since cases would survive longer and thus continue to be counted.

Tracking the natural history of HIV/AIDS in the hemophilia community would be useful in

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terms of planning for future health care needs, in estimating the time course of the disease in this group of people, and for adjusting estimates of the prevalence of hemophilia as the impact of HIV/AIDS wanes over time. The present study was designed to determine the annual prevalence from 1988 through 1997 of HIV infection in a defined population of persons with hemophilia A or B.

## Methods

Data for the present analyses were derived from the Oklahoma Hemophilia Surveillance System. Oklahoma is one of six states participating in a surveillance system supported by the Centers for Disease Control and Prevention (CDC). This project was initiated in 1993 and is intended to provide more precise, population-based estimates of the prevalence of hemophilia and its complications. The primary complications included in the surveillance system are HIV infection, AIDS, liver diseases, and joint complications. A hemophilia case is defined by a physician diagnosis of hemophilia type A or B and an anticoagulation factor activity level  $\leq 30$  percent.

Multiple methods of case finding are used by the Oklahoma Hemophilia Surveillance System in order to identify all cases throughout the state. A major source of cases is the Oklahoma Hemophilia Treatment Center (OHTC), a federally funded, comprehensive treatment facility for persons with hemophilia. Approximately 60 percent of all cases in the state are seen at the treatment center. Cases not receiving care at the treatment center are identified through private physicians, hospitals, pharmaceutical companies, home health agencies, laboratories, and patient-advocacy groups. Information on HIV infection status is available from medical records for 100 percent of patients at the Oklahoma Hemophilia Treatment Center, but is documented for only 20 percent of patients receiving hemophilia care from other sources. Thus, the present analyses of the temporal trends in HIV prevalence were limited to Oklahoma Hemophilia Treatment Center patients with hemophilia A or B. In addition, because only two cases among the study subjects were female, analyses were restricted to males.

The Oklahoma Hemophilia Surveillance System began data collection in 1993, and thus, prevalence rates of HIV infection for 1988 through 1992 were constructed retrospectively. The study group was defined as all individuals who received care for their hemophilia at the Oklahoma Hemophilia Treatment Center at any time between 1988 and 1997. Individuals who

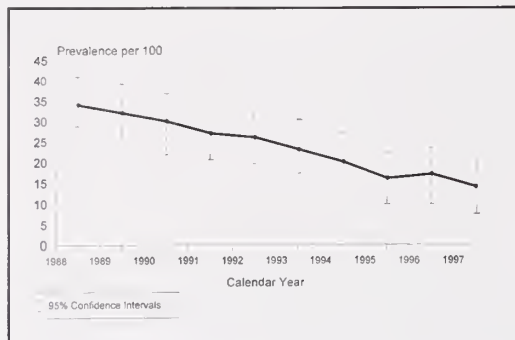
tested positive for anti-HIV antibody during the ten-year study period were identified from medical records. The year in which an HIV positive individual was first counted as a prevalent case was based on the earliest documented date of a positive test in the treatment center medical record or other medical records available as part of the surveillance system.

Routine testing for HIV infection in the Oklahoma Hemophilia Treatment Center population began in 1985, when the tests first became available. Within three years of the initiation of testing, all individuals receiving care at the treatment center were tested. The majority of cases were infected prior to the initiation of donor screening and heat treatment of anticoagulation factor concentrates in 1985. Therefore, the year in which an individual was first counted as a prevalent case does not necessarily represent their date of seroconversion. Following this initial phase of testing, all new patients and all existing patients who were HIV negative were tested on an annual basis. Two cases were known to have died of AIDS, but the date of their first positive HIV test was unknown. These individuals were counted in the denominator for each year's rates for as many years as they were known to be treatment center patients, but were counted as prevalent cases only in the year in which they died.

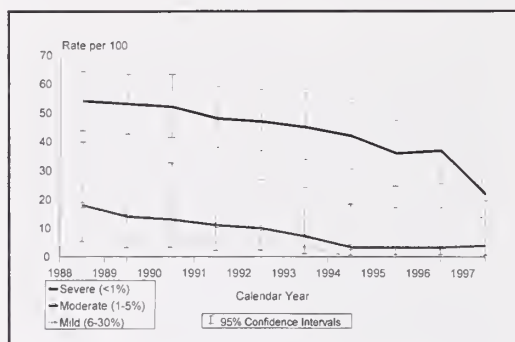
Denominators for the prevalence rates of HIV infection were based on the number of prevalent cases of hemophilia A and B tested for HIV and who were receiving care at the treatment center during each calendar year. These numbers were adjusted annually for all known deaths, and other additions and withdrawals in the treatment center population during the calendar year. While there were some differences in the study population over time, the vast majority of individuals were the same people each year. Thus, analyses are based on data from a population prospectively followed through calendar time and age, rather than repeated cross-sectional data from different groups of individuals. Ninety-five percent exact confidence intervals on the annual prevalence rates were calculated<sup>15,16</sup> and statistical comparisons of the differences between the Oklahoma rates and those of other published findings were made.<sup>17,18</sup>

Information on severity of hemophilia was obtained for each case from their medical record and categorized by anticoagulant factor activity level as mild (6-30%), moderate (1-5%), or severe (<1%). The factor activity levels of the study population were determined by the OHTC using a

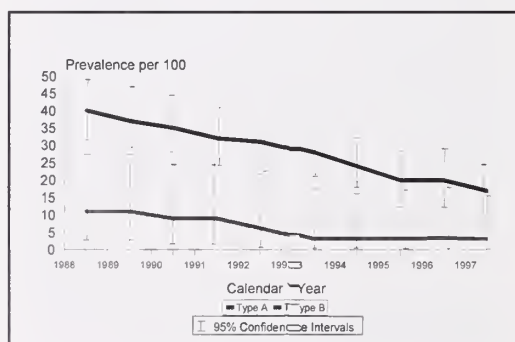
## Secular Trends in the Prevalence of HIV Infection



**Figure 1. Prevalence Rates of HIV Infection in Moles With Hemophilia. Oklahoma Hemophilia Treatment Center, 1988-1997**



**Figure 2. Prevalence Rates of HIV Infection by Severity of Hemophilia and Calendar Year. Oklahoma Hemophilia Treatment Center, 1988-1997**



**Figure 3. Prevalence Rates of HIV Infection by Type of Hemophilia and Calendar Year. Oklahoma Hemophilia Treatment Center, 1988-1997**

laboratory assay for coagulation factors VIII, IX, XI, and XII (Dade Behring, Inc., Newark, DE). These categories were used as surrogate measures for the amount of clotting factor or other blood products to which the individual was likely to have been exposed, since this information was not available prior to 1993. In addition, because the date of seroconversion is unknown, it is not possi-

ble to quantitate the amount of clotting factor used prior to infection with HIV. The age distribution for the annual age-specific prevalence rates was determined based on the ages of the individuals contributing to the annual rate as of December 31 of each calendar year.

## Results

Prevalence rates of HIV infection among individuals treated at the Oklahoma Hemophilia Treatment Center by calendar year are shown in Figure 1. The highest rate was observed in 1988 (34%), and the prevalence of HIV infection has declined in each subsequent year.

Prevalence of HIV infection by severity of hemophilia is shown in Figure 2. Approximately 80 percent of the individuals in the study population had hemophilia A, and, depending on the calendar year, 44 to 58 percent had severe disease. Compared to those with mild disease, the prevalence of HIV infection in persons with moderate hemophilia was at least twice as high throughout most of the time period covered. These rates are based on small numbers, however, and are therefore highly variable. The highest prevalence rates were observed in persons with severe hemophilia and were from four to 12 times higher than those in persons with moderate disease. This higher rate among individuals with severe disease was consistent throughout the study period with non-overlapping 95 percent confidence intervals in years 1988 through 1996.

The prevalence rates of HIV infection were greater among individuals with hemophilia A than those with hemophilia B throughout the 10-year study interval (Figure 3). While the shapes of the prevalence curves for the two groups were similar, the rates for individuals with hemophilia A ranged from approximately three to nine times those for individuals with hemophilia B. The prevalence of HIV infection among individuals with hemophilia A was higher than in those with hemophilia B, however, 95% confidence intervals overlapped in 1991 and 1995-1997.

In 1988, the highest prevalence rates were among 10- to 29-year-olds, with approximately 53 percent HIV positive. By the end of the 10-year study period, the highest prevalence rates were in those 30 to 39 years old, in which approximately 50 percent of the individuals were HIV positive. In 1990, the prevalence of HIV infection in the youngest age group fell to zero where it remained through the end of the study period, indicating no new infections among new cases of hemophilia.

## Discussion

In this population of males treated for hemophilia at the Oklahoma Hemophilia Treatment Center, all of whom were tested for HIV infection, the highest prevalence of HIV infection was observed in 1988 (34%). The rate declined steadily throughout the 10-year study period. The annual prevalence rates are somewhat lower than those reported in other populations.<sup>3,4,7,9,19,20</sup> It is unlikely the lower prevalence in the Oklahoma Hemophilia Treatment Center population represents geographic variation in the incidence of HIV infection resulting from contaminated anticoagulant factor. In contrast to HIV infection in other risk groups, infection in the hemophilia population has not shown geographic variation within the United States.<sup>7,16,17</sup> This lack of geographic variation is consistent with the manufacturing process and distribution patterns of commercially produced anticoagulant factor.

Rates of HIV prevalence in the Oklahoma Hemophilia Treatment Center are compared in Table 1 to those from a national, multicenter population of 1,056 individuals with hemophilia A or B. The overall prevalence of HIV infection in 1988 in the multicenter cohort was 60 percent (95% CI: 57-63), almost twice that of the Oklahoma study population (34%, 95% CI: 27-42). When the two study populations are stratified by disease type and severity, the Oklahoma population was shown to have a smaller proportion of individuals with severe hemophilia A (46%, 95% CI: 38-53) than the multicenter population (62%, 95% CI: 59-65). The risk of acquiring HIV is greater among those individuals with hemophilia A and those with severe disease.<sup>3,4,6-8,12,20,22-24</sup>

When the rates of HIV infection among the individuals with hemophilia A are adjusted for disease severity, the differences between the OHTC and multicenter population remain ( $p = .001$ ). Among individuals with hemophilia B, the numbers of those with moderate or mild disease in the two populations are too small to allow hypothesis testing. For those individuals with severe hemophilia B, there is a significantly lower proportion of HIV positivity among the OHTC population when compared to the multicenter study group ( $p = .019$ ).

While the primary risk factor for HIV infection in individuals with hemophilia is exposure to contaminated anticoagulant factor, differences in rates across populations may also reflect the underlying non-anticoagulant factor-related risk profiles of the general populations from which these groups come. Oklahoma had a low prevalence rate of HIV infection in the

|              | OHTC Population        |             |          |          | Multicenter Population* |             |          |          |
|--------------|------------------------|-------------|----------|----------|-------------------------|-------------|----------|----------|
|              | Number of Patients (%) | Number HIV+ | (%) HIV+ | [95% CI] | Number of Patients (%)  | Number HIV+ | (%) HIV+ | [95% CI] |
| Total        | 171                    | 58          | (34)     | [27-42]  | 1056                    | 630         | (60)     | [57-63]  |
| Severe       | 95                     | 51          | (54)     | [43-64]  | 745                     | 460         | (62)     | [59-65]  |
| Moderate     | 22                     | 4           | (18)     | [5-40]   | 106                     | 44          | (42)     | [32-52]  |
| Mild         | 54                     | 3           | (6)      | [1-15]   | 205                     | 46          | (22)     | [17-29]  |
| Hemophilia A | 136                    | 54          | (40)     | [31-48]  | 908                     | 584         | (64)     | [61-67]  |
| Severe       | 78                     | 49          | (63)     | [51-74]  | 659                     | 404         | (61)     | [57-64]  |
| Moderate     | 18                     | 3           | (17)     | [4-41]   | 80                      | 37          | (46)     | [35-58]  |
| Mild         | 40                     | 2           | (5)      | [1-17]   | 169                     | 43          | (25)     | [19-33]  |
| Hemophilia B | 35                     | 4           | (11)     | [3-27]   | 148                     | 46          | (31)     | [24-39]  |
| Severe       | 17                     | 2           | (12)     | [1-36]   | 86                      | 36          | (42)     | [31-53]  |
| Moderate     | 4                      | 1           | (25)     | [6-81]   | 26                      | 7           | (27)     | [12-48]  |
| Mild         | 14                     | 1           | (7)      | [2-34]   | 36                      | 3           | (8)      | [2-22]   |

\*Goedert et al. (4)

% Total

**Table 1. Prevalence Rates of HIV Infection by Hemophilia Type and Severity. Oklahoma Hemophilia Treatment Center and Multicenter Population, 1988.**

general population during the time period examined here, while the rates reported by Goedert, et al.,<sup>4</sup> are from populations primarily from the northeastern United States where the prevalence of HIV infection is higher.<sup>25</sup> In addition, the prevalence rates for the Oklahoma study population are based on very small numbers in most strata and are highly variable, as indicated by the wide confidence intervals.

Differences between the Oklahoma and the multicenter populations in the intensity of exposure to contaminated factor could have produced the lower prevalence rates in the Oklahoma study population. Individuals with hemophilia in the Oklahoma study population may have been less aggressively treated with anticoagulant factor than their multicenter counterparts and therefore, be less likely to have been exposed to contaminated factor. Information on factor usage prior to seroconversion in the Oklahoma study population was not available and thus, this possibility could not be evaluated.

Hypothetically, other reasons for the lower prevalence rate may exist. Increased mortality, resulting in a shorter duration of HIV infection, could contribute to the lower prevalence rate among the Oklahoma study population. Underascertainment of cases or an over-estimation of the denominator could also result in a lower prevalence rate. These explanations are unlikely, however, since there is no reason to anticipate increased mortality among the HIV positive individuals with hemophilia who are treated at the Oklahoma Hemophilia Treatment Center, and medical record information was available on 100 percent of the individuals in the study group.

Persons with severe hemophilia are reported to have been at increased risk of acquiring HIV infection, since their opportunity for exposure to contaminated factor concentrates was greater than that for persons with milder disease.<sup>4,6,8,12,20,22,23</sup> In the Oklahoma study population, the prevalence of HIV infection in persons with severe hemophilia was four to 12 times higher than that in those with moderate disease. This pattern is consistent with a probable dose-response effect for HIV infection with amount of exposure to clotting factor and other blood products.

The prevalence of HIV infection in the Oklahoma study population was three to nine times greater among individuals with hemophilia A than in those with hemophilia B, a finding consistent with other published reports.<sup>3,4,6,7,12,20,23,24</sup> The greater prevalence among individuals with hemophilia A has been hypothesized to result from greater factor usage, and therefore, increased opportunity for exposure.<sup>7,26</sup>

In 1990, the prevalence rate of HIV infection in those less than ten years of age fell to zero where it remained through the end of the 10-year study period. This finding supports the theory that the initiation in 1985 of donor screening and heat treatment of factor concentrates has virtually eliminated the risk of acquiring HIV infection from anticoagulant factor infusions, since no new cases were generated to compensate for those under 10 years who aged into the next decade or died during the course of the follow-up.

In summary, overall prevalence rates of HIV infection in the Oklahoma study population are lower than those reported in other populations. This difference persists when the rates of HIV infection are adjusted for disease severity. While the prevalence rate is lower in the Oklahoma study population, the pattern of increased prevalence among individuals with hemophilia A and those with severe disease is consistent with other published reports. Overall, the prevalence rate of HIV infection is decreasing in this population. Of particular interest is the drop in the prevalence rate to zero in 1990 in the youngest age group. This age group remained HIV-free through the end of the study period. Currently, it appears that no new cases of HIV infection among individuals with hemophilia who are treated at the Oklahoma Hemophilia Treatment Center are being incurred as a result of contaminated anticoagulant factor.

The recent introduction of protease inhibitors used in combination with other anti-

retroviral medications holds promise for a decrease in the mortality associated with HIV/AIDS in the population.<sup>27-29</sup> Successful treatment that would increase the survival following infection would dramatically alter the natural history of HIV infection in the hemophilia community, and thus slow the rate of decline of the prevalence rate of HIV infection in this population. J

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## 43-Year-Old Man With Respiratory Difficulty, Fever, and Chills: A Clinicopathological Correlation Conference from the University of Oklahoma College of Medicine

Bob Eaton, MD; Douglas Fine, MD; Masatoshi Kida, MD

### Case Presentation Douglas Fine, MD

The patient was a 43-year-old man known to be HIV seropositive for eight years. The most recent CD4 count four months prior to death was 54 cells/ $\mu$ l and the viral load was  $>100,000$  copies/ml. Anti-retroviral therapy was being altered. He was on dapsone for pneumocystis prophylaxis. One week prior to his first admission, he developed a progressive cough productive of small amounts of clear to yellowish sputum, increasing shortness of breath, fever, and chills. When admitted, he was thin, anxious but oriented, in moderate respiratory distress with a temperature of  $38.5^{\circ}$  C. Auscultation of the lungs revealed scattered crackles bilaterally. Arterial blood gases on room air revealed a pH of 7.43,  $p\text{CO}_2$  30,  $p\text{O}_2$  64, bicarbonate 20, and a chest x-ray showed bilateral mild interstitial infiltrates.

He was admitted with a working diagnosis of pneumocystis pneumonia. Because of allergy to sulfonamides, he was treated with IV pentamidine and high dose steroids. Sputum DFA for *Pneumocystis carinii* was negative  $\times 2$ . AFB smears were negative  $\times 4$ . Routine cultures were unremarkable. He improved rapidly on the above medications and was switched to oral therapy with trimethoprim, dapsone and tapering prednisone and discharged four days after admission.

He initially improved at home. One week after discharge, he began a new anti-retroviral regimen and soon thereafter developed anorexia and intermittent nausea. About two weeks after discharge, he experienced a renewal of fever, chills, headache, and myalgia. He denied dyspnea or cough. Lungs were clear to auscultation and the remainder of his exam was unremarkable. Chest x-ray showed improving bilateral lower lobe fibronodular densities. Cerebrospinal fluid was normal. He was treat-

ed briefly with erythromycin and ticarcillin-clavulanate. These were discontinued after 48-72 hours when all cultures remained negative.

On the third hospital day, he remained febrile but otherwise unchanged. Therapeutic doses of trimethoprim and dapsone initiated during the first hospitalization were changed to maintenance prophylactic doses for pneumocystis. On the fifth hospital day, he complained of a nonproductive cough and mild dyspnea. Auscultation revealed crackles two-thirds of the way up from the bases bilaterally, and blood gases on room air were 7.49, 26, 50, and 88% saturation. Chest x-ray showed diffuse bilateral interstitial and alveolar opacification. Intravenous pentamidine and prednisone were reinstituted and within 24 hours he was afebrile and less dyspneic with markedly decreased bilateral crackles.

Over the next week, he remained stable from a pulmonary standpoint with waxing and waning dyspnea, fever and bilateral crackles. Blood gases on the 10th hospital day were 7.45, 27, 58, and 93% on room air. Serial chest x-rays showed little change. On the 13th hospital day, the prednisone dose was further tapered to 20 mg/d and on the next day his IV pentamidine was discontinued and oral clindamycin and pyramethamine were substituted for pneumocystis therapy. On the 15th hospital day, he developed acutely increasing dyspnea with subcostal retractions and wheezing. On 2L by nasal cannula, the  $\text{O}_2$  saturation was 65%. On 100% non-rebreathing mask, the saturation improved to 93% with gases of 7.48, 24 and 57. It was thought that this acute deterioration was more likely related to decreased steroid dosage than to change in pneumocystis therapy and the former was increased to 40 mg/d. On this same day, CMV antigen was detected in 1,765 cells/200,000 evaluated and IV ganciclovir therapy was started for possible CMV pneumonia.

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Over the next 24 hours, he improved, remaining dyspneic but comfortable at rest. He continued, however, to have episodes characterized by abrupt increase in temperature as high as 40°C and acute increase in dyspnea, tachypnea and tachycardia usually associated with deterioration in blood gases. These episodes lasted one to two hours and then resolved, often following antipyretics. On the 17th hospital day, bilirubin was 1.1 mg/dl, alkaline phosphatase 362 U/L, SGOT 113 U/L, and the LDH had increased to 953 U/L. CT scan of the chest and abdomen to evaluate for lymphoma was unrevealing.

On the 21st hospital day, he had a more severe but similar episode of pulmonary decompensation requiring intubation and mechanical ventilation. On the 22nd hospital day, he developed asystole and died.

## Discussion and Radiology

### Bob Eaton, MD

I really don't think that the answer in this case is in radiology by itself. What I will do is go over the various things that we might be looking for in the chest in patients who are HIV positive. This list is not complete by any means, but presents the most common findings.

First of all, common bacterial infections are considerably more common in people who are HIV positive and are frequently one of the first manifestations of the disease. These infections include *Streptococcus pneumoniae*, which is somewhere around 10 times more common in people who are HIV positive. Bacteremia is about 100 times more common when you do have pneumococcal pneumonia. Pneumococcal pneumonia is often segmental or lobar, and most of the bacterial infections are usually not symmetrical. Cavitation is fairly common among all of these, especially with the pneumococcus and pseudomonas. As the CD4 count goes down, these become more and more common.

Pneumocystis pneumonia (PCP) was the most common infection in people with AIDS. With prophylaxis, maybe other infections are a little more common than PCP, but PCP is still very common. The x-ray appearance of PCP is quite variable, but typically is symmetrical with small 3-5 mm nodules in the lung. Later on, with confluence, there is a "ground glass" appearance. I think in this patient it was quite appropriate for the presumptive diagnosis to be PCP pneumonia.

Among fungal infections, we see more cases of aspergillosis; the tissue invasive type is often present and often with cavitation. The cavitation is usually secondary to involvement of the blood vessels and infarction, but it seldom is symmetrical in nature. Cryptococcus of course, is more common in the CNS, but it can also be present in the lung

and can be associated with multiple nodules in the lung. These can become confluent. Histoplasmosis often is disseminated when it occurs in HIV-infected individuals. Like other granulomatous infections in patients that are immunosuppressed, it frequently is atypical, especially in AIDS patients. Cavitation does occur but maybe not quite as frequently as it occurs with other infections.

Mycobacterial infections are very important in patients with AIDS and there is an increasing incidence of tuberculosis. From 1988 to 1992, there were approximately 50,000 more reported cases of TB than were predicted. AIDS is one of the main reasons. Initially, when the CD4 count is above 200, mycobacterial infections are similar to those in the general population: reinfection type with apical fibronodular infiltrates and cavitation. However, as patients become more immunosuppressed, the findings we see on x-ray are increasingly atypical. The inflammatory process occurs usually in the midportion and lower portions of the lung, and nodules occur throughout both lungs, and commonly with a miliary pattern. MAC, mycobacterium avium complex, is an atypical mycobacterium which can also cause pulmonary infections in immunosuppressed patients.

Among viral infections, herpes simplex can occur in the lungs and can be symmetrical. It can be alveolar in nature. Often times, small nodules occur within the lung and can be asymmetrical. CMV is a latent virus present in the general population. The primary infection often is asymptomatic and not recognized. The virus remains latent in the body. In immunosuppressed patients, especially AIDS patients, it is common to isolate the virus, but it often can't be shown to be causing disease. The fact that CMV was found in this patient may or may not be significant.

Rare pulmonary infections in AIDS are caused by *Toxoplasma gondii* and *Rhodococcus equi*. The latter often produces cavitating lesions in the lungs. Bacillary angiomatosis can also rarely occur in the lungs. Finally, strongyloides can also cause small nodules in the lungs.

Among neoplastic diseases, Kaposi's sarcoma is fairly common in the lung and can be multinodular. It often is associated with large mediastinal lymph nodes. Lymphoma, usually non-Hodgkin's type, typically involves the brain, but can involve the lung. Lung carcinoma is also more common in AIDS patients.

Lymphocytic interstitial pneumonitis (LIP) can occur in AIDS with exudative alveolitis. These become coalescent and produce a "ground glass" appearance.

Figures 1a and 1b are x-rays of the patient one year prior to the present illness. There may be a slight reticular pattern within the lung, but it really looks pretty normal. Again, there may be a bit



**Figures 1a and 1b. X-rays of patient's lung taken one year prior to present illness.**

of a reticular pattern and maybe a little scarring in the periphery. Other than that, it looks pretty normal. On a film six months prior to admission, I don't think there is any change in the appearance of the chest or in the reticular fibrotic pattern in the lung from the previous one.

The next x-ray was obtained when the patient came in for the first admission. In this close up of the left lung (Fig. 2), we see small nodular densities in the periphery with an overall ground glass appearance. These densities tend to be fluffy in nature around the periphery and to measure some-



**Figure 2. Close up view of patient's left lung taken upon first admission.**

where around 0.5 cm in diameter. I believe these represent the replacement of air in the alveoli of terminal bronchioles. I believe these indicate alveolar disease and that the ground glass appearance is actually confluence of multiple alveolar complexes.

This close up view of the left lung (Fig. 3) was obtained 18 days after the patient was first admitted. There is little or no change in appearance of the chest at this point. There still are these little nodules out here about 0.5 cm in size. There may be a little less of that ground glass appearance here but not very much. I would say there is little or no change in the appearance of the chest at that point. However, symptomatically, the patient had a non-productive cough, fever and shortness of breath on exertion. At this point, I believe the patient was being tapered off steroids. When he was admitted to the hospital two days later, the chest x-ray showed progression of the disease; yet the difference in symptomatology wasn't all that great. Now, in addition to having those little nodules around, there are areas that are negative; little alveolar complexes that still have air in them and are surrounded by alveolar complexes that are infiltrated. The infiltrate seems to be predominately hilar and extends to the edge of the chest. The lesion is fairly symmetrical (Fig. 4). This still is perfectly compatible with *Pneumocystis carinii*

pneumonia. This is a lateral view; what I want to demonstrate here is that the lesion is dependent, assuming the patient was in bed most of the time; ie, it's mostly posterior with sparing of the lung anteriorly and a tendency to spare the peripheral portions of the lung where there is a bellows action. If the periphery of the lung can be cleared by a bellows action it usually means there is fluid in the alveoli which can be cleared with motion. We have several chest x-rays that show almost exactly the same thing over the next week or so.

In conclusion, this picture is perfectly compatible with *Pneumocystis carinii* pneumonia. The problem is it got worse three weeks after the patient was started on therapy for pneumocystis. I think that is probably a good indication that it isn't pneumocystis pneumonia. About this same time, we did get indication of cytomegalovirus infection. The question is, is cytomegalic disease what we are seeing here or is that an incidental finding, as is often found in patients with AIDS. Cytomegalovirus pneumonia would look exactly like this. You have an exuding alveolitis. It tends to be very hilar in nature and extend out into the periphery. It can be quite variable. Chest x-rays stay about the same for a couple of weeks.

I think it is significant that there is very little evidence of mediastinal lymphadenopathy. In patients with TB with a low CD4 count, for instance, you tend to see more of a primary type TB pattern with lymph node involvement on the same side in the hilum and in the mediastinum. There is a lack of lymph node involvement in this case.

Next we see that the consolidated areas are primarily in the periphery. As we get down to the hilar area we see that there is a ground glass appearance with air bronchograms. I think this clearly shows that the tracheobronchial tree is open. There are no nodules that we can identify within the bronchi and we have a ground glass appearance in both lungs in the dependent portions with a small amount of pleural effusion. The process is very symmetrical. The anterior segments of the upper lobe and apical segments of the upper lobe are spared somewhat.

One thing I think might be helpful is to look at the differential diagnosis of ground glass opacity on the CT, which implies that there is a confluence of fluid and fibrin (Fig. 5). The initial diseases to think of are the various interstitial pneumonias. Sarcoidosis should be considered but I can't imagine sarcoidosis changing quite as rapidly as this pneumonia did in the second hospital admission. Hypersensitivity pneumonitis could certainly do this. Alveolar proteinosis is one of the causes of ground glass opacity. Eosinophilic pneumonia and respiratory bronchiolitis can also have this appearance. The most common cause of ground glass appearance is pulmonary edema, which we see



**Figure 3. Close up view of patient's left lung taken 18 days after first admission.**



**Figure 4. X-ray of patient's lung taken upon second admission (20 days after first).**

every day. Also, pulmonary hemorrhage could give you a bilateral symmetrical appearance with the ground glass opacity; but the patient hasn't had any hemoptysis, so I wouldn't think that is very likely. I believe this is an inflammatory disease of some kind because of the alveolar nature of the appearance on chest x-ray.

CMV pneumonia is what I think he had: CMV antigen was documented and radiographically

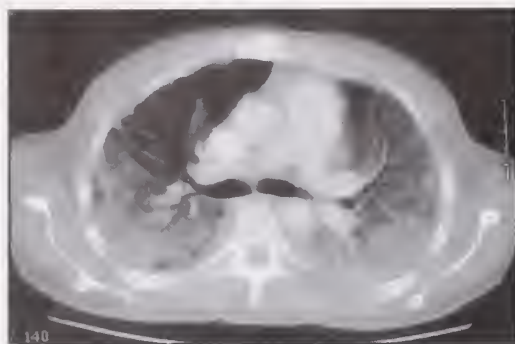


Figure 5. CT showing "ground glass opacity."

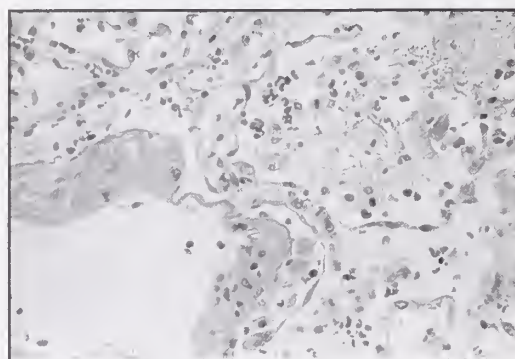


Figure 6. Lung: "Hyaline membranes" - Alveolar spaces showing hyaline membrane formation (left lower) and fibrin deposit (right upper) (H&E, x 250).

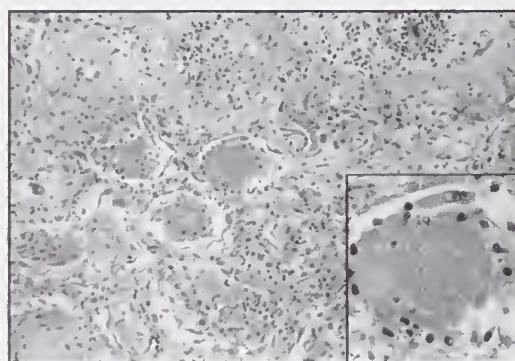


Figure 7. Lung: Acute Pneumonia - Some of the alveolar spaces contain eosinophilic material (H&E, x 125). [inset: intra-alveolar eosinophilic material with a bubbly appearance compatible with *Pneumocystis* organisms (x500).]

CMV pneumonia looks exactly like pneumocystis pneumonia. I think the most likely diagnosis is CMV pneumonia in a patient with AIDS.

#### Pathology Masatoshi Kida, MD

Autopsy was performed 21 hours after death and was limited to chest and abdomen. The deceased was an ill-appearing adult male. Gross examina-

tion revealed visceral pleurae diffusely covered by fibrinous exudate. Adhesions involving the left lingular lobe, diaphragm and pericardium were noted. On sectioning, both lungs were consolidated, focally red and purple. The entire lungs were non-crepitant, implying almost no air in the lungs. There was a roughly triangular-shaped hemorrhagic area, 6.5 x 3.5 x 3.5 cm, in the left upper lobe and immediately next to the area was an occluded pulmonary vessel. The trachea showed focal mucosal erosion. Cardiovascular organs were grossly unremarkable. The esophagus, stomach, and small intestine were grossly unremarkable with intact mucosa. In the colon, there were some small, circumscribed mucosal hemorrhagic foci. The omentum was focally hemorrhagic. The liver was congested and enlarged. The gallbladder, biliary tree and pancreas were grossly unremarkable. The left kidney showed a simple retention cyst in the superior pole. Otherwise, the genitourinary system was grossly unremarkable.

Histological examination revealed the most significant changes in the lung. Figure 6 is a representative photomicrograph showing diffuse hyaline membrane lining many of the alveolar spaces. Hyaline membrane formation suggests significant alveolar damage. Some of the alveolar spaces were also filled with partially organized material. An area of hemorrhage was also seen and some of the large and medium-sized blood vessels showed thrombus formation. These clot formations were considered to be the cause of the hemorrhagic changes.

There were also areas of significant acute pneumonia. Some of the alveolar spaces showed eosinophilic intraluminal material with a bubbly appearance (Fig. 7). Histologically, this is very suggestive of *Pneumocystis* organisms, which was confirmed by silver stain. Special stain for acid fast organisms was negative and there were no granulomas. Enlarged cells with peculiar eosinophilic nuclei were seen throughout the lung fields, morphologically compatible with "atypical" CMV cells (Fig. 8), in addition to "typical" CMV cells which showed characteristic Cowdry type A nuclear inclusions (Fig. 9). Immunohistochemical study confirmed CMV antigen in these cells (Fig. 10). Atypical CMV cells are frequently seen in immunocompromised patients with CMV infection. The cells are enlarged compared to surrounding cells and show peculiar banana-shaped or ovoid, eosinophilic, smudged nuclei, perinuclear clearing, and peripheral condensation of the cytoplasmic material. These perinuclear clearing and peripheral condensation of cytoplasmic material give a plasma cell-like appearance, although the cell size is much larger than that of plasma cells. Multiple eosinophilic globules in the cytoplasm are also seen in atypical CMV cells.

The trachea had mucosal erosion; in tissue adjacent to the erosion, there were atypical CMV cells next to blood vessels and capillaries. Atypical CMV cells were seen throughout the alimentary tract, including esophagus, stomach, duodenum, small intestine and colon. The liver contained CMV cells in the portal space, which probably explained the abnormal liver function tests. Atypical CMV cells were also seen in the pancreas, the kidneys, the spleen, and the adrenal cortex.

In summary, the cause of death was determined as severe diffuse alveolar damage due to CMV pneumonitis and *Pneumocystis pneumonia* with disseminated CMV infection as a complication of AIDS.

### Case Discussion Douglas Fine, MD

I would just like to make two clinical comments. First, I think this case represents an example of misleading clinical responses to empiric therapy. The patient initially rapidly improved on empiric therapy for PCP, which included pentamidine and steroids. It was therefore postulated that he developed *pneumocystis pneumonia* while on dapsone prophylaxis. The second episode occurred as that therapy was being concluded, when he was again on *pneumocystis* prophylaxis. In such a setting, it would be quite unusual for PCP to relapse so rapidly and dramatically. Although *pneumocystis* appeared to play a role, the improvement on empiric therapy may have been due more to steroids than to anti-*pneumocystis* therapy.

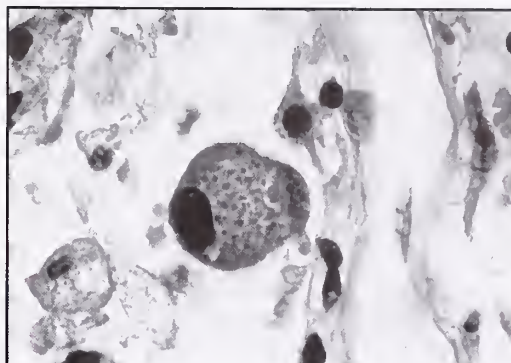
Secondly, in spite of the facts that CMV pneumonia is common in transplant patients and that CMV infection of other organs is common in AIDS patients, it is uncommon, if not rare, for CMV pneumonia to occur in AIDS patients. This is one of only a very few cases that we have seen at this center.

**Question:** Did the detection of CMV antigenemia really provide the answer?

**Answer:** Detection of CMV antigenemia is quite useful. In solid organ transplant recipients, a level above 100 cells per 200,000 would be indicative of either an impending CMV infection or one that is active. The number that we use with AIDS patients is about 30 cells. Really high values like this patient had is evidence for an active CMV infection, but not necessarily evidence for CMV pneumonia. □

### The Authors

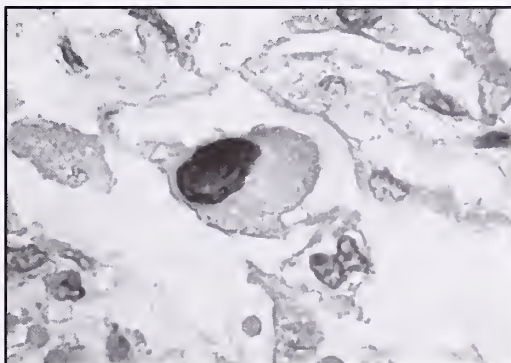
Bob G. Eaton, MD, is professor and chairman of the Department of Radiological Sciences at the University of Oklahoma Health Sciences Center (OUHSC) in Oklahoma City. Douglas Fine, MD, is professor and chair of the Department of Medicine at the OUHSC in Oklahoma City. Masatoshi Kida, MD, is assistant professor of pathology at OUHSC in Oklahoma City.



**Figure 8. Atypical "CMV cell"** - Enlarged alveolar lining cell showing eccentrically located, moderately enlarged, ovoid-to-"banano"-shaped nucleus, perinuclear cytoplasmic clearing, peripheral metachromatic condensation of cytoplasm and multiple eosinophilic intracytoplasmic globules. Cowdry type A nuclear inclusion is not seen (H&E, x750).



**Figure 9. Typical "CMV cell"** - Enlarged alveolar lining cell showing nuclear enlargement with Cowdry A-type nuclear inclusion and prominent halo surrounding the inclusion (H&E, x750).



**Figure 10. Atypical "CMV cell"** - Atypical cytomegalic cell showing positive nuclear immunoreactivity to Cytomegalovirus antigens (immunohistochemistry, x750).

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# PRACTICE MANAGEMENT

## Preventing Employment-Related Lawsuits

Linda G. Scoggins, JD

Whether running a medical practice of one or 10 physicians, personnel issues are often a major preoccupation. Although no amount of "preventive maintenance" will totally eliminate personnel problems, there are many steps which can be taken to avoid problem situations, and there are many actions that can strengthen an employer's defenses in the event that problems result in claims for discrimination and/or wrongful termination.

Establishing fair employment policies that are consistently followed by managers who make carefully considered, well-documented employment decisions will go far to protect a practice from liability. This paper will provide a brief refresher course on Oklahoma's law regarding wrongful discharge and employment at will, as well as the principal laws prohibiting discrimination in the work place. It will provide some practical suggestions for avoiding employment-related claims.

The employment-at-will doctrine stands for the proposition that employment indefinite in duration can be terminated at any time without notice and with or without cause unless the termination is based on an unlawful reason. Federal and state employment laws, such as Title VII of the Civil Rights Act of 1964, the Age Discrimination and Employment Act, and other similar statutes cover the unlawful reasons which can still subject an employer to potential liability when discharging an employee. However, those statutes usually require that the employer have at least 15 employees.

For years, Oklahoma followed the employment-at-will doctrine. In recent years, however, court decisions have weakened that doctrine. In 1989, the Oklahoma Supreme Court, in *Burk v. K-Mart Corp.*, recognized a tort cause of action for a "public policy exception" to the employment-at-will doctrine.<sup>1</sup> Specifically, the Supreme Court held that a discharged employee could sue for a tort of wrongful discharge if the employee

was discharged "for refusing to act in violation of an established and well-defined public policy" or "for performing an act consistent with a clear and compelling public policy."

The most common cases within this exception are retaliation for "whistleblowing" actions and actions where it is alleged the employee was discharged for refusing to act in violation of an established and well-defined public policy. Examples where employers have been held liable for wrongful discharge include a bank auditor who was terminated because he refused to destroy or alter a report to the bank's audit committee and an employer found liable for terminating an employee who had reported an employer's regulatory violations to the Health Department.

Oklahoma employers also need to be careful about other claims that may arise from employee discipline or termination. Such claims include defamation (libel and slander), intentional infliction of emotional distress, assault, and battery. Intentional infliction of emotional distress, assault and battery are often claimed in connection with alleged sexual harassment when the employer has fewer than 15 employees and, therefore, does not fall under the federal statute covering sexual harassment.

Defamation claims most frequently arise in the context of discharge from employment and may arise as a result of critical work evaluations or disciplinary actions taken publicly. Defamation claims have also arisen as a result of responding to reference checks. However, Oklahoma law offers some protection for employers who truthfully respond to reference checks about former employees and are then sued for defamation because they provided negative comments or observations.<sup>2</sup>

The information provided must be limited to job performance (as opposed to personal areas), the former employee must consent to disclosure, and the

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information about the job performance must be true (good faith action of employer). It is also important to remember that true statements, no matter how disparaging, are never actionable as defamation. Of course, truth is an affirmative defense which the defendant has the burden of proving.

Federal and state civil rights laws are designed to protect certain classes of individuals from employment discrimination. The prohibitions and mandates established by these laws are far-reaching in their effect on day-to-day employment decisions and apply to many, but not all, employers. Some of these laws prohibit certain kinds of discrimination and some establish mandatory affirmative duties. A brief survey of the federal employment discrimination laws illustrates the broad range of protected classes:

#### **Title VII of the 1964 Civil Rights Act ("Title VII"):**

- Bars employment discrimination on the basis of race, color, religion, sex, pregnancy, and national origin.
- Prohibits workplace harassment on any of these bases.
- Prohibits retaliation against current or former employees for opposing an unlawful employment practice or participating in any investigation, hearing or proceeding under fair employment laws.
- Applies to employers with 15 or more employees.

#### **Equal Pay Act:**

- Bars gender-based wage bias.
- Applies to all employers engaged in commerce or in the production of goods for commerce.

#### **Immigration Reform and Control Act ("IRCA"):**

- Bars discrimination on the basis of national origin or citizenship status.
- Applies to employers with three or more employees.

#### **Age Discrimination in Employment Act ("ADEA"):**

- Bars discrimination against persons aged 40 years or older.
- Applies to employers with at least 20 employees.

#### **Americans with Disabilities Act of 1990 ("ADA"):**

- Bars discrimination against individuals with disabilities and requires public services and accommodations to be usable and accessible

to such individuals.

- Covers employers with 15 or more employees.

#### **Family and Medical Leave Act of 1993 ("FMLA"):**

- Bars discrimination against employees who exercise their rights to family or medical leave under the conditions set forth in FMLA.
- Applies to employers with 50 or more employees.

State laws in Oklahoma also prohibit employment discrimination on all the bases covered by Title VII, ADEA, and ADA.<sup>3</sup> As under federal law, harassment in the workplace on any of these bases is prohibited, as is retaliation against any individual for filing a discrimination claim. Oklahoma employers must also add smokers to the list of protected classes.<sup>4</sup> Although an employer may maintain a "smoke-free" workplace, it is unlawful in Oklahoma for an employer to discharge any individual, or otherwise disadvantage any individual with respect to compensation, terms, conditions, or privileges of employment because the individual is a non-smoker or smokes or uses tobacco products during non-working hours.

Despite the complexities of the employment laws, there are many steps an employer can take to avoid complaints. These steps—many of which are very simple and straightforward—provide the double benefit of minimizing liability and fostering a fair and orderly work environment.

1. Make sure that your office manager (or anyone else with the authority to make employment decisions) is trained in the requirements of the laws.
2. Establish fair employment policies.
3. Communicate your policies to your employees.
4. Consistently enforce your policies.
5. Investigate promptly issues of employee misconduct and employee complaints.
6. Properly document your employment decisions.
7. If terminating an employee, conduct a termination meeting with two employee representatives present. □

#### **The Author**

Linda G. Scoggins, Esq., is a director of and practicing attorney with Hartzog Conger & Cason in Oklahoma City.

#### **References**

1. 770 P.2d 24 (Okla. 1989)
2. 40 Okla. Stat. § 61
3. 25 Okla. Stat. § 1101 et seq.
4. 40 Okla. Stat. § 500 et seq.

# News

## Fight Against Tobacco Gets a Superhero Visit

It's a bird! It's a plane! No, it's the Extinguisher and his trusty sidekick Dr. Know!

The AMA anti-smoking, superhuman, superhero and his smart, hip creator and mentor Dr. Know are coming to Oklahoma for a week-long adventure beginning September 23. The healthy duo will travel to elementary schools in rural communities promoting anti-tobacco awareness while providing a positive role model for young children.

The Extinguisher's visit to the Sooner State is sponsored by the Oklahoma State Medical Association and the OSMA Alliance in cooperation with the Oklahoma State Department of Education and the Tobacco-Free Oklahoma Coalition.



*The Extinguisher visits with elementary school children promoting anti-tobacco awareness and healthy living through abstinence from smoking and other tobacco products.*

## OU Department of Pathology Recognizes Oklahoma Physician

A plaque honoring the late University of Oklahoma pathologist James P. Dewar, MD, was recently unveiled at a reception attended by his family and former colleagues. Dr. Dewar served the OU Department of Pathology as chief of laboratories and of surgical pathology from 1950 to 1963 and is credited with diagnosing almost 60,000 surgical specimens during that time. In 1979, the University conferred the title of "clinical professor of pathology emeritus" on Dr. Dewar.

The inscription on the plaque, which will be permanently displayed in the Department of Pathology, recognizes Dr. Dewar "for his dedication and commitment as a medical professional and for his service, teaching and leadership during his time at the University of Oklahoma College of Medicine."

"Countless Oklahomans benefited from Dr. Dewar's exact diagnoses," said Fred Silva, MD, immediate past chair of the department. "The University of Oklahoma and the Department of Pathology deeply appreciate and gratefully acknowledge his many years of outstanding service."

## Council on Member Services Offers Fall 1999 Seminars

The OSMA Council on Member Services offers seminars on various topics designed to meet both professional and personal needs of OSMA member physicians. Two seminars are scheduled for this fall as follows:

*Investment Management—Asset Allocation for the Next Millennium*, by OSMA Preferred Vendor James Baker & Associates, Sept. 18, 8:30-9:45 am, OSMA Headquarters

This breakfast seminar is designed for physicians and spouses. Topics to be discussed include: top down vs. bottom up analysis; fundamental and technical risk measurement; duration & convexity; beta & standard deviation; is Wall Street research useful?; industry analysis and conflicts of interest; methodologies for fixed income analysis; methodologies for equity analysis; and a question & answer session.

*Communicating: Physicians, Employees, and Public Relations*, by Bobbi Dobbs, owner of Positive Performance Group, Oct. 13, 1:30-5:30 pm, Tulsa; Oct. 14, 1:30-5:30 pm, Oklahoma City

This seminar is designed for physicians, spouses, and office personnel. Positive and effective communication plays an important role in a medical practice. This seminar will inform and motivate physicians and their office managers to communicate better, increase the levels of collaboration and mutual support at work, and feel better about themselves.

Topics to be discussed: dimensions in communication styles (4 basic styles); self evaluation and how to identify others' style of communication; differences in communication style; differences that are justifiable and predictable; building on the differences (how to get along with those whose style differs from yours); handling tension in relationships through versatility techniques so everyone wins; and applying it at home, as well as work.

## **AMA Endorses Patients' Rights Bill**

The AMA's Board of Trustees voted to endorse the bipartisan Norwood-Dingell patients' rights bill (H.R. 2723), calling for patients, physicians and the public to mobilize behind the legislation. The decision was praised by President Clinton for sending "a strong message to Congress" that it is time to pass meaningful patient rights legislation. This is the first time this congressional session that the AMA has endorsed a specific patients' rights bill.

"This bill delivers the essential protections patients and voters are demanding," said Thomas R. Reardon, MD, president of the AMA. "Doctors will be allowed to make

medical decisions. Health plans will be held accountable for their actions. Patients can appeal if their care is delayed or denied. And the bill's protections will apply to everyone with private health insurance."

H.R. 2723 is sponsored by Rep. Charles Norwood (R-GA) and John D. Dingell (D-MI). The bill would ensure that people in HMO plans have access to emergency room care, guarantee access to specialists, let patients get doctor referrals outside their networks and allow lawsuits against HMOs that deny care. More than 60 Republican and Democratic members of the House of Representatives are co-sponsors.

"The Norwood-Dingell bill is a win-win for patients and for Congress," Dr. Reardon said.

Dr. Reardon also recognized Oklahoma Representative and physician Tom Coburn for his efforts in patient protection legislation. "The AMA also commends Representatives Tom Coburn of Oklahoma and John Shadegg of Arizona for their efforts to develop meaningful patient protection legislation. We will continue to work with Rep. Coburn, Rep. Shadegg and the House Republican leadership as the Coburn-Shadegg proposal moves towards introduction and formal consideration."

## **Communication Award Established**

An award to recognize physicians whose communication skills create solid relationships with patients to provide the best quality care has been established by the Bayer Institute for Health Care Communication.

The first Bayer Institute Distinguished Physician Communicator Award was presented to US Surgeon General and Assistant Secretary for Health David Satcher, MD, on Aug. 9 at the 1999 Annual Convention & Scientific Assembly of the National Medical Association in Las Vegas.

The national award is sponsored by the Bayer Institute for Health Care Communication, a non-profit organization dedicated to improving communication between physicians and patients through education, research and advocacy.

## **Keating Announces Appointments of OSMA Member Physicians**

The results are in for many Oklahoma physicians nominated to serve on a variety of medical and health boards. Governor Frank Keating announced several appointments to state boards and commissions on Aug. 10. Eight members of the Oklahoma State Medical Association were among those chosen as representatives.

Bill B. Crowell, MD, Chickasha, was appointed to the Department of Mental Health and Substance Abuse Services to serve a term ending Dec. 31, 2002.

John R. Alexander, MD, Tulsa, was reappointed to the State Board of Medical Licensure and Supervision to serve a term ending July 1, 2006.

Thomas W. Tryon, MD, Miami, and John H. Stuenkel, MD, Forest Park, were reappointed to the Sooner Care Task Force to serve terms ending Feb. 15, 2001.

Rodney L. Huey, MD, Broken Arrow, was reappointed to the Telemedicine Advisory Council to serve a term ending July 1, 2004.

Gordon H. Deckert, MD, Oklahoma City, was appointed to the Youth Suicide Prevention Task Force to serve a term ending Nov. 1, 2000.

Marie Bernard, MD, Oklahoma City, was appointed to the Medical Advisory Committee of the Health Care Authority.

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### Lawrence E.C. Joers, MD 1900-1999

Lawrence E.C. Joers, MD, died June 5, 1999. Dr. Joers was born August 17, 1900, in Milwaukee, Wis., and received his medical degree from the School of Medicine, Loma Linda University, Loma Linda, Calif. in 1934. He served a total of eight years in the Navy during both World War II and the Korean conflict and achieved the rank of Captain. Dr. Joers was a member of the Washington State Medical Association, the American Medical Association, and was a life member of the Oklahoma State Medical Association.

### Hyman J. Drell, MD 1920-1999

Hyman J. Drell, MD, died July 15, 1999. Dr. Drell was born May 14, 1920, in Chicago. He attended the University of Illinois School of Medicine and received his medical degree in 1943. From 1944 to 1947, Dr. Drell served in the U.S. Army as a Captain in the Medical Corps. During his years of practice, Dr. Drell was a member of the Oklahoma County Medical Society and the American Psychiatric Association and received a 50 Year Award from these organizations. Dr. Drell was also a life member of the Oklahoma State Medical Association.

### Lee Bailey Word, MD 1904-1999

Lee Bailey Word, MD, died July 22, 1999. Born October 16, 1904 in Windom, Texas, Dr. Word received his medical degree from the University of Arkansas College of Medicine in 1930. During World War II, Dr. Word served with the U.S. Army, holding the rank of Lieutenant Colonel upon discharge. Dr. Word was a life member of the Oklahoma State Medical Association.

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Norman

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St. Anthony Hospital -  
Oklahoma City

Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

Valley View Hospital  
Ada

### Course offerings from OSMA Accredited Institutions

#### Integrus Baptist Medical Center - Donna Schoenfelder - 405-949-3284

|                 |   |              |             |
|-----------------|---|--------------|-------------|
| Sept. 1         | Autologous Transfusions   | noon         | 1 hour      |
| Sept. 2         | Diagnostic & Prognostic Strategies for Evaluation<br>for Stable Angina Patients | 7 am         | 1 hour      |
| Sept. 3, 10, 24 | Tumor Board   | 7 am         | 1 hour each |
| Sept. 13        | Critical Issues in Transfusion Medicine   | 7 am         | 1 hour      |
| Sept. 14        | Modern Aspects of Pain Management<br>in Palliative Care                         | 8:15 am-noon | 3 hours     |
| Sept. 17        | Management of Cancer in the Geriatric<br>Patient                                | 7 am         | 1 hour      |
| Sept. 23        | Incontinence/Urology  | 7 am         | 1 hour      |

#### Deaconess Hospital - Cyndi Nelson - 405-604-4979

|          |                 |         |        |
|----------|-----------------|---------|--------|
| Sept. 20 | Pain Management | 6:30 pm | 1 hour |
|----------|-----------------|---------|--------|

#### Mercy Health Center - Debbie Stanila - 405-752-3806

|                        |  |          |             |
|------------------------|--|----------|-------------|
| Sept. 1, 8, 15, 22, 29 | Tumor Board  | 7 am     | 1 hour each |
| Sept. 2                | Angiotensin Blocker in Hypertension<br>-New Strategies | 12:15 pm | 1 hour      |
| Sept. 9                | Adverse Drug Reactions                                 | 12:15 pm | 1 hour      |
| Sept. 16               | Migraine: Diagnosis & Treatment                        | 12:15 pm | 1 hour      |
| Sept. 21               | NeuroScience Institute Lecture Series                  | 7 am     | 1 hour      |
| Sept. 23               | Dysglycemic Macroangiopathy                            | 12:15 pm | 1 hour      |
| Sept. 30               | Obesity  | 12:15 pm | 1 hour      |

#### Irwin Brown Office of Continuing Medical Education-Letricia Harris-405-271-2350

|                |   |          |
|----------------|---|----------|
| Sept. 17-18    | Independent Medical Examiner<br>Educational Program               | 11 hours |
| Sept. 22-24    | 38th Annual Ob/Gyn Fall Symposium                                 | 16 hours |
| Sept. 22-25    | 9th Annual Rainey Williams<br>Surgical Symposium                  | 15 hours |
| Sept. 25       | Stroke Prevention and Treatment<br>in the New Millennium (Series) | 4 hours  |
| Sept. 30-Oct.3 | Triad National Physician's Leadership Conf.                       | 7 hours  |

#### St. Anthony Hospital-Sandy Coury-405-272-6358

|          |   |           |        |
|----------|---|-----------|--------|
| Sept. 6  | Cancer Conf. Case Presentations   | Cancelled |        |
| Sept. 13 | Medicine Grand Rounds-Drug Interactions Part II   | 8 am      | 1 hour |
| Sept. 13 | Oncology Grand Rounds   | 12 pm     | 1 hour |
| Sept. 20 | Cancer Conf. Case Presentations   | 12 pm     | 1 hour |
| Sept. 27 | Medicine Grand Rounds- Current Role of Transesophageal<br>Echo In Everyday Medical Practice | 8 am      | 1 hour |

#### Institute for Mental Health-Teresa Peden-405-573-8226

|          |   |         |        |
|----------|---|---------|--------|
| Sept. 17 | Optimal Health Through the Balance of Work<br>and Family Values-OCCE/Norman | 8:30 am | 1 hour |
|----------|---|---------|--------|

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator, at 405-843-9571.*

## Membership Development

"We are in a membership crisis," proclaimed AMA Alliance President Ann Hansen at a recruiting workshop in Chicago. She was speaking on the national level, but her concern is echoed at our state and county levels as well. As the 1999-2000 OSMA Alliance first vice president, my primary interest and goal is membership development.

Our state Alliance's membership has experienced a gradual decrease over the last several years. As of May 31 of this year, our total state membership stood at 938 members, a decrease from 1,097 members at the same time in 1998. That translates to a 14 percent decrease! Of our 13 active county Alliances at that time, only one—Pontotoc-Johnston—had an increase in membership; two stayed the same and 10 counties lost members.

My job and the job of each county membership chairperson this year is to "help potential members see what's in it for them." Our organization has so much to offer and we need to work to get that message to the physician spouses. For example, membership in the county Alliance offers its members the chance to help stop violence in their community and county by supporting the SAVE (Stop America's Violence Everywhere) program. It offers members the opportunity to use their voice for legislative advocacy. It offers members the chance to be part of a service organization that has distributed more than one million "Hands Are Not For Hitting" activities to school children.

Members can take advantage of a wonderful leadership training program by attending the AMAA's Confluence in Chicago, plus many other programs and opportunities. In short, I believe a mem-

ber of the Alliance has the opportunity to contribute to a greater good, develop personally and professionally, and strengthen his or her community, each possible with varying levels of involvement.

And just as importantly, membership offers a peer network beyond compare.

As vice president of new Alliance development, Karen Mask wrote in the July issue of the *Journal*, "We are excited to be helping three communities form new Alliances."

Karen's efforts will help achieve what I have set as a goal during my tenure as vice president of membership development—"1,000 in 2000!" I would like to work toward altering that downward membership trend mentioned previously by achieving a total state membership of 1,000 members in the year 2000.

If you are a physician spouse and are interested in membership in the Alliance, I will be happy to answer any of your membership questions and tell you "what's in it for you."

If you live in a county that has an established Alliance, I will direct you to your county Alliance membership chair. If you live in a county that does not have an established Alliance, I will be happy to talk with you about becoming a "member at large" or about organizing a new Alliance in your county.

Please feel free to contact me at 405/360-2620 or by fax at 405/360-9505. I look forward to hearing from you.



**Linda Leemaster**  
*First Vice President*  
**OSMA Alliance**

---

"I would like  
to work  
toward...  
achieving a  
total state  
membership  
of 1,000  
members in  
the year  
2000."

---

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# IN MEMORIAM

## The Oklahoma State Medical Association Remembers Perry A. Lambird, MD

The Oklahoma State Medical Association, the practice of medicine, and the people of Oklahoma lost a great friend with the tragic death of Perry A. Lambird, MD. Dr. Lambird and his wife Mona and daughter Jennifer were killed in a tragic automobile accident on Wednesday, August 25, while vacationing in Turkey.

"We are all saddened by the sudden and tragic death of Dr. and Mrs. Lambird and their daughter," said Boyd O. Whitlock, MD, OSMA president. "But while we grieve for our colleague and friend and for his family, we nevertheless rejoice in his life and in the legacy of service and accomplishment for which he will always be remembered."

During his professional career, Dr. Lambird served Oklahoma physicians as President of both the Oklahoma State Medical Association (OSMA) and the Oklahoma County Medical Society. He also served as Speaker and Vice Speaker of the Oklahoma State Medical Association House of Delegates and was a member of the OSMA's Council on State Legislation and Regulation, the Council on Long Range Planning and Development, the Executive Committee, and the Committee on Maternal and Child Health.

Nationally, Dr. Lambird served as a delegate to the American Medical Association (AMA). During his tenure on the AMA Council on Medical Service, which included two years as Chair, Dr. Lambird championed the standard of free and unfettered medicine throughout the United States, emphasizing medical IRAs, vouchers, patient choice and physician autonomy. He testified on these issues before the United States Congress, the Reagan Commission on Medicare, HCFA, and other agencies.

Perhaps Dr. Lambird's most important contribution to organized medicine was his 14-year tenure as Chair of the OSMA Council on Governmental Activities, during which time he restructured the OSMA's federal relations program into a national model for other state medical associations.

"There are two things, in particular, that stand out in my mind about Perry Lambird," said David S. Russell, MD, Chairman of the OSMA's Board of Trustees. "First, he had a reputation throughout the state as an excellent pathologist. He was a superb clinician in his chosen specialty and was an excellent resource for his colleagues. Second, he was very committed to the medical profession and spent a great deal of his time and energy on issues of importance to doctors and their patients. He was very involved in promoting the good medicine agenda of our profession."

In addition to his own state and national leadership, Dr. Lambird also recruited and mentored many others to serve their profession. In recognition of his achievements he was a five-time recipient of the AMA Outreach Award for membership recruitment.

"I can't begin to describe the impact Perry Lambird had on my life," said Sara Reed DePersio, MD, MPH, FACPM, State Health Officer and Deputy Commissioner for Personal Health Services, Oklahoma State Department of Health. "I consider myself fortunate to be one of the many people that Dr. Lambird encouraged to become active in organized medicine at the national level. He was a true leader in that arena as well as for

those of us who learned from him how to be effective representatives of those who elected and appointed us to serve."

"Perry Lambird had an energy that was infectious when you worked with him," said Jay A. Gregory, MD, Chairman of the Oklahoma Delegation to the AMA. "He made every person feel as though they had something to contribute, that their opinion was valuable, and that they should never be shy about speaking up."

At the time of his death Dr. Lambird served as chairman of the Medical Arts Laboratory, director of Southern Medical Arts Companies, Inc., and chief medical officer. He had been associated with Medical Arts Laboratory for over 30 years, and played a significant role in making it one of the southwest's largest and most respected laboratories. He was also a founding member of the Board of Directors of PROklahoma Care, a statewide, physician-owned and -operated managed care organization.

"I've known Dr. Lambird since 1979 when he joined the medical staff of Duncan Hospital as a consulting pathologist," said Robert J. Weedn, MD, OSMA president-elect. "He was an excellent pathologist who made some extraordinary calls. He was a good friend, and they were wonderful people."

Dr. Lambird was also at home in the university setting. He served as a Clinical Professor in both the Department of Pathology and the Department of Orthopedic Surgery and Rehabilitation at the University of Oklahoma College of Medicine. He also served for 10 years as an Adjunct Assistant Professor at the Oklahoma City University School of Management and Business Sciences. His own academic record included receiving a Bachelor of Arts with Great Distinction from Stanford University and an MD from The Johns Hopkins School of Medicine. He also earned an MBA with High Honors from Oklahoma City University.

But for all his achievements in medicine, perhaps Dr. Lambird's greatest pride was his family. He and his wife of 38 years, Mona Salyer Lambird, were a team in every sense of the word. Mrs. Lambird was a respected practicing attorney with an Oklahoma City law firm and was the first woman president of the Oklahoma Bar Association. The Lambirds were also the proud parents of four daughters: Allyson, Jennifer, Elizabeth, and Suzannah. In a 1996 interview, Mrs. Lambird said her favorite recreational activity was "exploring international capital cities and discovering their uniqueness." It was an interest she shared with her husband.

*Memorial contributions may be made in memory of Perry and Mona Lambird to the Oklahoma City Community Foundation.*



*Perry Lambird, MD, and his wife Mona Salyer Lambird died in an automobile accident on August 25 while vacationing in Turkey. The Lambirds' daughter Jennifer also died in the accident.*

# JOURNAL

## Call for Papers

The *Journal* invites the submission of piquant, constructive commentary, interesting case reports and review articles. The *Journal* supports the mission of the Oklahoma State Medical Association — “to promote the best health for the people of Oklahoma in a professional manner by advocating for patients, representing physicians and promoting the art and science of medicine.” The *Journal* promotes and improves health education by reviewing, publishing and distributing original scientific articles provided by physicians and researchers who share their knowledge and perspectives on issues of concern to the physicians and medical students in Oklahoma. (See Instructions for Authors on page 467.)

## Call for Photos

For those who enjoy photography, the *Journal* encourages the submission color photographs of Oklahoma scenes or native wildlife for consideration as cover photos.

## Call for News

In addition, the *Journal* welcomes general news items featuring medical trends which have an effect on the practice of medicine in Oklahoma. Announcements of an Oklahoma physician’s role in a national organization or project are also invited.

## Submit Materials

Your submission of these types of materials will be much appreciated. The *Journal* team will be eager to assist in the processing of submissions. Address your envelope to:

***Journal*, Oklahoma State Medical Association**  
601 West I-44 Service Road  
Oklahoma City, OK 73118

## The Rewards

The *Journal* offers a means for scientific information to be distributed to physicians in Oklahoma. The reward to the author may be not only in the form of public recognition if published, but the work may draw an award from the Oklahoma State Medical Association, with an announcement at the Annual Meeting.

**Don’t hesitate to call a member of the *Journal* team at 405/848-2171 with questions.**

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OCTOBER 1999



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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

OCTOBER 1999

VOL. 92, NO. 10

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Photo of a great horned owl by Stanley N. Schwartz, MD.  
Art direction by Transcript Press.





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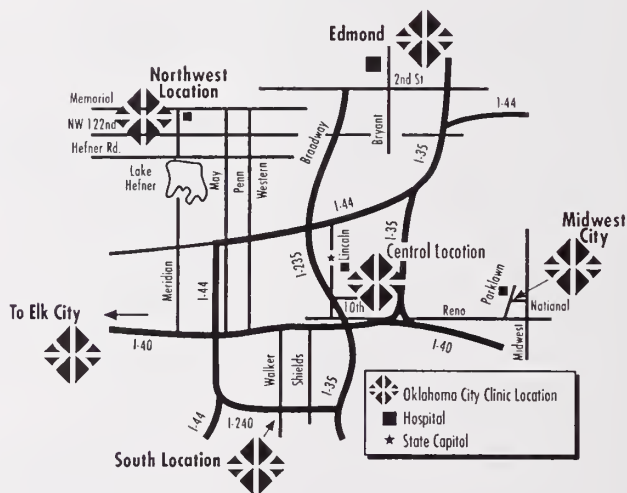
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## On Frustration...

Well, I have been on the phone again this week. Using the telephone to communicate with insurance companies is taking up an ever-expanding portion of my time...going to the trough of managed care to advocate for my patient. Once again, I am told that the medication is not on formulary and I am asked if I have tried the generic equivalents. They then tell me that there will be a fax transmission that will require my documentation and signature. I am to fax this form back to the insurance company. They then will let me know in 24 hours if my request for a non-formulary drug is granted. I love this system.

For years I have been getting a "report card" from one of the managed care companies. This report card shows that, compared to my colleagues, I use an extravagant percentage of generics. They have congratulated me for my management of a precious resource, their premium dollar. I bought into the idea; I continued my use of less expensive medicine. I pat myself on the back with each prescription.

Then there is that patient who has had side effects or a rash or nausea with the generic drug and I am confronted with using the newest drug "du jour." The patients always love the commercials that tell of the wonders of these new medications, asking me to try these wonderful "television medicines" for their problem. I write the medication, looking up the dose because I have not used it before. I describe the side-effect potential to the patient and send them on their way.

An hour passes and my nurse catches me in the hall stating that Mr. Jones is having chest pain at the pharmacy; it started right after they presented him with the bill for the new medicine that I had written for him. The pharmacist also told him that the insurance would not cover the cost of the medicine. The pharmacist was on the phone wanting to know if it would be all right to give Mr. Jones a prescription for nitroglycerin, to help him with his chest pain.

As they say in southern Oklahoma, those drug companies are "proud" of their medicine.

I call Mr. Jones and his pain has resolved but he is angry with me for not telling him how many mortgages it would take to purchase the medication; and then, to make matters worse, it was not covered by his insurance. I mumble something about not knowing the medication was not on the formulary.

He asks me why I don't keep up with the formularies. I respond that they change quarterly and there are 24 insurance plans that I try to follow. He doesn't hear this; he is thinking

about what the pharmacist told him...Doc can write a letter to the company and get them to cover this. Just get him to do that...

Back to the tape recorder, explaining in a letter to the insurance company why this medication is necessary.

A week later I get another letter from the insurance company about the fact that my letter did not come on their form and if I would call a 1-800 number, they would fax me their form. (Why don't they just mail those forms out with the letter?)

I have the nurse call the 1-800 number, only to be told that they need to talk with the doctor...a nurse or office assistant will not work.

By this time I am livid. I get the message from the nurse that I must call to request the form that I will need to fill out and fax back in for possible permission to obtain a non-formulary medication for an already upset patient, who thinks that I am marginally competent anyway.

"Hello, this is the @#\$% prescription service. Please enter your three-digit physician code and the seven-digit number from the insured's medication card. If you need assistance push two and an operator will be right with you."

Ten minutes and several curse words later I am still waiting. I can't find the number on the card and I am waiting until a human being comes to the phone...I hope.

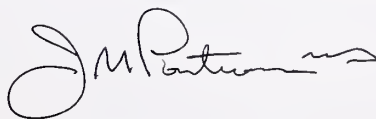
She answers the phone, is not interested in my commentary about the foolishness of the system. She wants to know who the patient is and what I need. "What is your fax number?" I tell her again, although my office has given this information several times before...

They fax me the form; I spend my next evening filling it out and faxing it back.

Then the next day they fax me back a form that says something about "sorry for the inconvenience..." The medication that I am seeking for my patient is on the revised formulary and payment will be forwarded to the pharmacy.

Am I missing something here? Or is this system really messed up?

I would like to discuss this with you but I must go now—I have to fill out more forms. It really has been a privilege to talk with you...



J. Michael Pontious, MD  
Editor-in-Chief

**"Experience  
teaches only  
the teachable."**

**Aldus Huxley**

An editorial is a column of personal opinion that may or may not reflect the official position of the OSMA.

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G. Keith Montgomery, MHA  
Executive Director

# PRESIDENT'S PAGE

## Physicians' Culture

**W**e must not forget "*our culture*." As we are pulled in all directions by governmental intrusion, increasing paper work, managed care, and all those things that seem to threaten the doctor/patient relationship, we need to keep "*our culture*" strong.

As we sometimes seem to be more competitors than colleagues, and are referred to often as providers instead of physicians, we must not lose "*our culture*."

We can all recall the days when physicians stopped in the halls of their hospitals to talk about interesting patients. We remember socializing in the Doctor's Lounge, having lunch together, and occasionally getting together in the evenings to have dinner and talk about our shared problems of patient care. That camaraderie is that to which I refer as "*our culture*."

Nancy Dickey, MD, immediate past president of the AMA, spoke of doctors as "folks with that little something extra." She referred to doctors as rare individuals with the passion to practice medicine and a great compassion for the world in which we practice. That is "*our culture*." In this way I think we differ from many other groups.



Bill Golden, MD, past president of the American Society of Internal Medicine (ASIM), said in 1996, "In the near future, dollars may take precedence over professionalism and quality." We see almost daily that we have lost some of the control of medical decision-making. I think we have seen a dent in our commitment to medical ethics and professionalism. We see many threats to the doctor/patient relationship. All these things are part of the threat to "*our culture*."

Goal #5 of the OSMA's long-range plan says that we will make every effort to increase unity and collegiality of the medical profession. We will strive to promote civility among physicians, to find systematic ways to deal with differences of opinion, to improve communications with OSMA members and to utilize CME activities to increase unity and collegiality.

We will do all we can to encourage all our members to work together and to improve our collegiality...to maintain "*our culture*."

A handwritten signature in dark ink that reads "Boyd O. Whitlock MD." The signature is written in a cursive, flowing style.

Boyd O. Whitlock, MD  
OSMA President

---

"We will do all  
we can to  
encourage  
all our  
members to  
work together  
and to  
improve our  
collegiality"

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## Carpal Tunnel Syndrome Between Two Centuries

Ghazi M. Rayan, MD

Compression neuropathy is one of the most frequently encountered conditions in a hand surgeon's daily practice. Median nerve compression at the wrist or carpal tunnel syndrome (CTS) is the most common of all nerve compression syndromes of the upper extremity<sup>1,3</sup> and CTS has been used as a model for studying compression neuropathy (CN). This compressive lesion of the median nerve occurs in a tunnel located within the wrist called the carpal tunnel. Severe chronic inappropriately treated CTS can cause prolonged symptoms and lead to permanent nerve damage. Carpal tunnel release (CTR) is currently among the most commonly performed surgical procedures on the hand in the United States. The profound economic impact of this trend is reflected by the escalating tangible and intangible costs associated with its management. This article contains current information and cumulative knowledge up to the turn of the century on the basic science, etiology, diagnosis, and management of CTS.

### History

The first description of CTS was in 1854 by Paget.<sup>4</sup> Although CTS is 145 years old, awareness of this condition by the medical community was heightened 50 years ago. Most of our current knowledge related to CTS, however, was established only in the last 30 years. This is perhaps because the last three decades of this century have witnessed a surge in the incidence of CTS. The term CTS was coined by Moersch<sup>5</sup> in 1938. In 1946 Cannon and Love<sup>6</sup> treated CTS with division of the transverse carpal ligament. Phalen<sup>7</sup> in 1966 reported more than 650 cases of CTS along with description of diagnostic and surgical treatment methods. Pfeffer et al<sup>8</sup> stated that CTS is the most frequently diagnosed, best

understood, and most easily treated entrapment neuropathy. A wealth of related knowledge was acquired from basic science and clinical studies using investigative tools varying from MRI to outcome studies. Despite the insight, CTS etiology in many cases remains elusive, the condition remains pervasive and prevalent, its incidence is increasing, certain aspects of its diagnosis are debatable, its management is mutable between open and endoscopic releases, and its care is costly.

### Relevant Anatomy

#### Peripheral Nerve

Peripheral nerves including the median nerve comprise neural and nonneural tissue. Neural tissue consists of nerve fibers that coalesce into fascicles and the fascicles are contained within the nerve trunk. A nerve fiber has cell body, axon, Schwann cells, and sensory or motor terminal nerve endings. The axoplasm is the nerve cell cytoplasm and contains the cytoskeleton and organelles (mitochondria, endoplasmic reticulum, vesicles, etc). The cytoskeletal elements include microfilaments, neurofilaments, and microtubules that are essential for axonal transport. Nerve fibers can be sensory, motor, or autonomic and can be classified into unmyelinated and myelinated fibers. Unmyelinated fibers develop by envelopment of several axons in one Schwann cell. Myelinated fibers develop by a process of myelination, i.e. a Schwann cell wraps multiple layers of its membrane around a single axon forming segments called internodes that are separated by the nodes of Ranvier.

Non-neural tissue consists of the microvascular system and connective tissue. The microvascular system encompasses an elaborate network of extrinsic and intrinsic microneural

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vessels with abundant anastomosis that are necessary for nerve survival. The connective tissue constitutes 40 to 50 percent of nerve trunk. The epineurium (external and internal interfascicular) protects and covers the nerve trunk, the perineurium surrounds fascicles and acts as a barrier, the endoneurium (Schwann cell tube, i.e. Schwann cell basal lamina and the adjacent endothelial connective tissue) is located outside or in-between myelinated axons and supports individual nerve fibers. The endothelium of intrafascicular capillaries forms a blood-nerve barrier and the perineurium forms a protein diffusion barrier. A healthy endoneural environment is maintained by the blood-nerve and perineurial diffusion barriers and by a mildly positive endoneural fluid pressure. Peripheral nerves can be monofascicular (one fascicle) oligofascicular (two to 10 fascicles) or polyfascicular (more than 10 fascicles).

### Median Nerve at the Wrist

The median nerve is polyfascicular varying from 15 to 45 fascicles with an average of 35 fascicles. Intraneural topography shows plexiform branching to be rare in the carpal tunnel area, but occurs more frequently proximally in the forearm and distally after sensory and motor branching occur. Individual branches can be traced proximally into the forearm.<sup>9</sup>

The median nerve supplies the radial two lumbrical muscles and the thenar muscles with the exception of the deep head of the flexor pollicis brevis. The sensory territory of the median nerve spans the thumb, index, middle, and one-half of the ring finger. The median nerve proximal to the carpal tunnel has a round cross-section, but it becomes flat within the carpal tunnel. The nerve lies in a plane between the digital flexor tendons and transverse carpal ligament (TCL). At the wrist crease level, the median nerve is in line with the middle finger. In the mid-section of the tunnel, the nerve is located anteriorly and radially, but sometimes in the midline.

Variations of the median nerve in the carpal canal occur between 9 and 18 percent and include anomalies of the thenar branch, accessory branches, and high division.<sup>10</sup> The palmar cutaneous branch (PCB) of the median nerve is located at 2 mm radial to thenar crease or 5 mm radial to the intertheal depression.<sup>11</sup> The nerve originates 6 to 8 cms proximal to the wrist crease, courses in its own tunnel immediately ulnar to flexor carpi radialis tendon and terminates 4.5 cm distal to the wrist crease in four

radial and two ulnar branches. The PCB can develop entrapment neuropathy within its own tunnel from extrinsic trauma. The thenar (recurrent motor) branch of the median nerve take off is frequently radial, seldom anterior and rarely ulnar. Thenar atrophy in CTS may be encountered more frequently with anterior take off. It runs distally and often has an extraligamentous course. Subligamentous and transligamentous courses are less frequent. Thenar atrophy probably occurs more often with the transligamentous course where the branch has its own tunnel in the TCL. Lack of thenar atrophy in severe cases of CTS may be due to Martin-Gruber communication. All branches of the median nerve should be protected during surgical treatment of CTS.

### Carpal Canal

The carpal tunnel is a narrow channel that contains nine flexor tendons, their tenosynovium, and the median nerve, which is located superficial to the flexor tendons.<sup>12</sup> It is a rigid confined unyielding fibrous space that is viewed anatomically as open ended (proximally and distally), but physiologically as a closed compartment.<sup>13</sup> The floor of the canal is a concave arch that consists of the carpometacarpal bones, joints, and ligaments. The roof consists of the flexor retinaculum and TCL. The carpal canal has an oval shape cross-section and an hourglass coronal plane with the narrowest dimension (20 mm) at the mid portion which is also the level of the hamulus and widest dimension (24 mm) proximally and distally.<sup>14</sup> The mid portion is a potential site of nerve entrapment as the tunnel is surrounded by bones from three sides and tough TCL palmarly.

### Transverse Carpal Ligament

The TCL is attached to the scaphoid and trapezium radially and to the pisiform and hamate ulnarly. The TCL is approximately 3 mm thick and 3 cm wide. It has fusiform cross-sectional shape, i.e. thick in the middle (3 mm) and thin proximally and distally (1 mm). The distal palmar wrist crease represents the level of the proximal border of the ligament. The TCL is deeper than and adherent to the palmar aponeurosis. The TCL continues with the flexor retinaculum proximally and distally.<sup>14</sup> The TCL fibers are strong and run transversely and can be seen clearly with the endoscope during endoscopic CTR.

## Classification of Nerve Injuries

Seddon classified nerve injuries into neurapraxia, axonotmesis, and neurotmesis. Sunderland<sup>15</sup> classified them into five degrees of increasing severity. In first degree injury (neurapraxia) temporary block of axonal conduction occurs with or without local myelin damage, but all nerve components are intact. In second degree injury (axonotmesis) there is loss of axonal continuity followed by Wallerian degeneration distally. Spontaneous recovery occurs in this injury but requires longer time than first degree injury. In third degree nerve injury the perineurium is intact, but Schwann cells, axons, and the endoneurium are disrupted. The regeneration may be incomplete with development of intraneural fibrosis. In fourth degree injury only the epineurium is intact and in fifth degree injury the nerve is transected (neurotmesis). Lundborg<sup>16</sup> emphasized that the mildest form of nerve injury is the metabolic block after which nerve function recovery occurs either immediately or remotely. In CN the neuropathology is in the form of metabolic block, first degree injury, i.e. neurapraxia with demyelination or second degree, i.e. injury axonotmesis with associated Wallerian degeneration. These changes take place distal to the level of compression. Proximal changes in the cell body also take place, including dispersal of Nissl substances and peripheral displacement of the nucleus.<sup>17</sup>

## Pathophysiology

The axonal transport is a dynamic system responsible for transporting synthesized material from the cell body to terminal axon ending (anterograde) and substances in the opposite direction (retrograde). The anterograde axonal transport is either fast or slow and the transmitted substances include neuroproteins, neuropeptides, glycoproteins, glycolipids, etc. The retrograde transport carries recycled material including enzymes and neurotrophic factors such as nerve growth factor. Vasoactive intestinal peptide was observed to be a constituent of the axonal transport and plays a role in CN and nerve degeneration and regeneration.<sup>18-20</sup> In CN the axonal transport is inhibited with subsequent metabolic ionic block and failure of the sodium potassium pump.<sup>16,21,22</sup> In severe compression neuropathy, the following neurophysiologic factors are compromised: axonal transport, blood-nerve and perineurial diffusion barriers, electrical conductivity, and Na-K pump.

Two schools of thought exist regarding the pathophysiology of nerve compression,

mechanical and vascular. Peripheral nerves are vulnerable to ischemia and susceptible to mechanical forces. Sunderland<sup>15</sup> emphasized the importance of maintaining pressure gradient for adequate intrafascicular circulation and nutrition. Increased pressure within the median nerve in the carpal tunnel produces pathologic changes due to ischemia, which occurs in stages. In stage one, venous obstruction results in hypoxia. In stage two, anoxia causes capillary endothelial damage and edema. In stage three, arterial occlusion results in irreversible fibrosis. Rydevik and Lundborg<sup>23</sup> also emphasized the significance of the vascular component in the pathogenesis of CN, and observed progressive diminution of the intraneural micro-circulation following experimentally produced graded acute nerve compression leading to compromise of the perineurial diffusion barrier and blood-nerve barrier. Chronic nerve ischemia probably activates fibroblasts leading to collagen formation and ischemia-fibrosis cycle.

Experimentally produced acute nerve compression using a tourniquet model in baboons<sup>24</sup> showed electron-microscopic changes of single myelinated fiber in the form of internodal segmental demyelination, infolding of the myelin, and distortion of the nodes of Ranvier causing internodal intussusception. Experimental chronic compression<sup>24</sup> in guinea pigs showed focal demyelination of the entrapment region, distortion of myelin segments which was thinner near the middle of the entrapment region and thicker at the periphery giving the internodal segment the appearance of tadpoles swimming away from the lesion in both directions. These findings support a mechanical component for the pathogenesis of CN. The effects of compression, however, are dependent on the fiber size (large more susceptible than small), fiber type (myelinated less resistant to compression than nonmyelinated), the amount of connective tissue (sparse more susceptible than abundant), and topographic location of the fibers within the nerve trunk (superficial more susceptible than deep). The peripheral nerves have built in mechanisms of protection against mechanical forces. The connective tissue framework protects the nerve to some extent against compression. When the mechanical forces of compression, traction, and friction exceed the built-in mechanisms of protection, compression, or traction, neuropathy develops. The elastic property of the peripheral nerve protects it from traction lesions that occur when tensile forces exceed the nerve's inherent ability to

elongate and recoil. Nerves can elongate up to 20 percent before internal damage results.

Wilgis and Murphy<sup>25</sup> suggested that in CN the nerve is fixed locally to its bed and this interferes with its normal longitudinal excursion during joint movement and adds a traction force that potentiates the damage. In chronic nerve compression, increased vascularity and thickening of the connective tissue elements occur, especially in the epineurium, with simultaneous thinning of the myelin or its disintegration due to demyelination and Wallerian degeneration.<sup>26</sup> This fallout is usually encountered in large myelinated fibers and later may be associated with remyelination. Cross-striations can be seen in a normal relaxed nerve through the epineurium and perineurium. In severe cases when axonal distortion is present these spiral bands of Fontana will no longer be visible in areas of chronic nerve compression. It appears that both mechanical and vascular factors contribute to the pathophysiology of CN, one however may predominate depending on the magnitude, duration, and rate of force application.

### Biomechanics of the Carpal Tunnel

Recent biomechanical studies of the carpal tunnel have revealed remarkable findings of significance to the pathomechanics of CTS.<sup>13,27-34</sup> Dynamic interactions take place within the normal carpal tunnel during forearm, wrist, and digital joint motions between the median nerve, digital flexor tendons, and lumbrical muscles along with alterations in carpal canal volume and pressure. The canal pressure is greatest with the forearm in full supination and least in 45° of pronation. While the wrist in neutral position, the carpal tunnel volume is greatest and carpal tunnel pressure is least (2.5 mm Hg). During ulnar-radial deviation, the carpal tunnel pressure increases. During full wrist flexion and extension, the following changes take place: 1) nerve strain or traction occurs and especially increases with extension; 2) longitudinal median nerve excursion takes place, 7 mm distal and 15 mm proximal to the tunnel; 3) the flexor digitorum superficialis and flexor pollicis longus tendons migrate posteriorly during extension and around the nerve during flexion; 4) narrowing of the tunnel or decrease of its volume takes place especially in extension; and 5) the carpal tunnel pressure increases to 30 mm Hg.

While digits are in neutral position: 1) digital flexor muscle bellies incursion occurs into the canal; 2) nerve strain occurs; and 3) the nerve is interposed among digital flexor ten-

dons. During full digital flexion the following changes occur: 1) lumbrical muscle incursion occurs and the muscles migrate proximally from the hand into the canal; 2) longitudinal median nerve excursion averages 1 cm with linear relationship to tendon excursion; 3) slight lateral nerve excursion takes place; 4) shear forces are generated between nerve and tendons; 5) the moment arm of digital flexors increase as the loaded tendons migrate anteriorly; 6) the volar bowing of the TCL is altered while counteracting medially and laterally directed carpal forces; and 7) the tunnel pressure increases and is influenced by MP joint angle that is greatest with MP neutral and 90° flexion and least with 45° of flexion.

Disturbance of carpal tunnel biomechanics seems to play a role in the pathogenesis of CTS. Gelberman et al<sup>33</sup> have shown in CTS the carpal tunnel pressure with the wrist in neutral position is 30 mm Hg whereas in full flexion the pressure can reach 90 mm Hg and with full extension it can be as high as 110 mm Hg.<sup>32</sup>

### Etiology and Clinical Types

#### Etiology

CTS is an expression of traumatic pathologic and physiologic conditions that share a common underlying mechanism instigated by minimal spatial tolerance and imbalance between capacity and volume with increase in canal content/volume ratio. The etiology of many CTS cases remains elusive, but as we improve our knowledge of the carpal tunnel biomechanics we will be able to elucidate many cases of idiopathic CTS. Nearly half of CTS cases are bilateral which suggests that underlying systemic disorders may contribute to the etiology. When systemic factors are present, releasing CT may not relieve symptoms completely. Conditions that alter fluid balance such as pregnancy and oral contraceptives may predispose to CTS. The significance of local factors is becoming increasingly recognized. Tenosynovitis whether nonspecific or due to inflammatory arthritis such as rheumatoid disease, wrist osteoarthritis, and tumors are pathologic factors. Carpal tunnel syndrome has been reported in association with a number of medical conditions, most often diabetes mellitus and hypothyroidism. Proven predisposing factors for CTS include obesity, smoking, alcohol consumption, and lack of exercise. The role of occupational activities alone in the etiology of CTS is still debatable and not yet conclusive.

### **Acute CTS**

Acute CTS has a sudden onset of symptoms that are often severe. The various causes include the following:<sup>33,35</sup> trauma such as wrist fractures, crushing injury, and gunshot wound; infection such as septic tenosynovitis;<sup>36</sup> blood diseases such as hemophilia; metabolic conditions such as gouty tenosynovitis;<sup>36</sup> congenital vascular conditions such as thrombosed persistent median artery;<sup>37</sup> steroid injection of the carpal tunnel; burns; and iatrogenic from zealous packing of bone grafts during wrist fusion.

### **Chronic CTS**

#### ***Extrinsic Elements***

Extrinsic elements are due to ill-fitting casts or splints or constricting objects such as tight application of hand cuffs,<sup>38</sup> a watch, or surgeons gloves.<sup>39</sup> Repetitive and forceful use of the hand with the application of pressure to the palmar aspect of the hand and wrist, and use of power vibrating tools with direct pressure, all have been attributed as a cause of CTS.

#### ***Intrinsic Elements***

Intrinsic elements are due to anatomic structures such as anomalous muscles (lumbrical hypertrophy and proximal location, palmaris longus, palmaris profundus) or pathologic conditions such as distal radius malunions, inflammatory proliferative tenosynovium as in rheumatoid arthritis, osteoarthritis, tumors, perineural scarring from previous carpal tunnel surgery, and amyloid neuropathy.<sup>40</sup>

#### ***Idiopathic***

Most encountered cases of CTS are of unknown etiology. Studies have shown a non-specific tenosynovial hyperplasia that occasionally present in the cases. The TCL and tenosynovium are usually normal in patients with idiopathic CTS. Histologic changes were observed more in the tenosynovium (mucoid change) than the TCL (fibrosis), but these changes were infrequent and mild and hence they cannot be implemented in the pathogenesis of idiopathic CTS.<sup>41</sup>

### **The Work Place and Economics Prevalence**

Over the last three decades the incidence of CTS has nearly quadrupled and this trend is most noticeable in the work place.<sup>42</sup> All indications lead to the conclusion that this surge will continue well into the next century. Carpal tunnel syndrome however is prevalent among individuals whose occupations place great physical

demands on their hands. Repetitive wrist flexion and extension, intense gripping, and awkward wrist flexion as in using heavy machines, hand and power tools, and computer keyboards may be precipitating factors for CTS.

It is estimated that the prevalence of CTS is 1 percent in the general population and up to 15 percent among workers engaged in high-risk industries. The causes of this trend are unknown, but studies that investigated this complex issue have generated two schools of thought regarding its prevalence in the work place. Some studies attributed CTS to repetitive motion, excessive force, rapidly increased work cycle, and poor work habits or posture in a stressed and automated industrial setting. Technological advancements and the shift from an industrial to a service oriented society is the reason for jobs becoming fast paced and more repetitive. Other studies have attributed the incidence increase to changing work ethics, abuse of compensation mechanisms, antiquated workers' compensation laws, and heightened awareness of CTS as a workers' compensation disorder. The advocates of this school believe that the culprits are sometimes the patients' psychological profile and often the lifestyle, and argue that approximately 15 percent of one's life is spent at work and the remaining time is spent engaging in all other activities including house chores, hobbies, and sports.

Although CTS is now considered the number one occupational disease, it is not predominantly an occupational disorder. No one is immune from CTS as the condition may affect people of any age, race, gender, and socioeconomic status and patients from all walks of life including blue-collar workers on assembly lines, white-collar workers using computer keyboards, athletes, musicians, housewives, elderly people, and even children.

#### **Economics**

CTS has a profound economic impact.<sup>42</sup> It is one of the most frequently encountered conditions in the practice of physicians dealing with musculoskeletal disorders. CTS has become a major cause of workers' compensation claims. The condition is now recognized as a major public health problem. There are an estimated 20 million workers on assembly lines or at other jobs requiring repetitive and continuous upper extremity motions or awkward wrist positions which theoretically increase their risk for developing CTS. Carpal tunnel surgery is among the most commonly performed surgical procedures

in the US. According to the Centers for Disease Control approximately 240,000 carpal tunnel operations are done each year in the US and 50 percent of these are considered work related. Cost shifting is often the incentive for HMOs to label CTS a work-related condition. At present the costs of surgery for one case of CTS can reach tens of thousands of dollars after all medical and tangible costs are calculated. It is likely that these costs will continue to escalate especially as other unconventional methods of treatment are increasingly utilized, such as chiropractic manipulations. Work absence is high among workers' compensation recipients with CTS as compared to non-recipients for both operative and nonoperative treatments.<sup>43</sup>

### **Causality**

Physicians who treat workers with CTS are often faced with the difficult task of determining whether the condition is work-related. Certain occupations can contribute to symptoms of CTS in a worker, but not every worker with CTS should be considered to have the condition as a result of his or her employment.<sup>44</sup> Determining the causality in these patients sometimes can be a tough proposition. When determining CTS causality, three issues are taken into consideration by this author: 1) systemic factors such as systemic diseases, physiological disturbances, and psychological conditions; 2) ergonomic factors such as the nature of patient's work, including force and repetition; and 3) patient's lifestyle including the frequency of hand use outside work, hobbies, sports, and social habits. When these issues are factored into the equation, one can determine whether the condition is: 1) work-related; 2) not work-related; or 3) partly work-related. In many patients CTS belongs to the last category, and is caused by a combination of activities done at work and outside work.

The causality of CTS should not be viewed in a vacuum, as the condition is often not cut and dried. Workers' compensation laws in some geographic areas are accommodating for the partly work-related conditions which are the majority of cases. In such system, no single party bears the entire financial responsibility.

### **Clinical Presentation**

Most cases of CTS occurred among patients between 40 and 60 years of age, however recent years have witnessed a trend towards an incidence increase among younger age groups, especially in the work place. The condition is very rare among children and adolescents and

more common in women than men. Children with mucopolysaccharidosis were reported to develop CTS.<sup>45</sup> These patients often have associated trigger fingers. The most frequent symptoms among CTS patients are paresthesias and palmar wrist and hand pain. The paresthesias are activity induced and frequently nocturnal, occurring a few hours after retiring and relieved by shaking or massaging the hand. Many patients complain about the hand feels "fat" or "swollen," weakness, clumsiness, and dropping objects. The patient experiences paresthesias, hypesthesia, and sometimes dyesthesias in the distribution of the median nerve. The paresthesias are occasionally associated with pain in the wrist and forearm. These symptoms are often aggravated by using the hand in simple activities of daily living such as driving a car or holding a newspaper or a cup.

Strenuous or repetitive use of the hand can aggravate the pain which may radiate to the forearm, elbow, or shoulder. The provocative maneuvers for CTS are wrist flexion (Phalen's) and median nerve digital compression tests. The Phalen's test is done by the patient placing the wrist in complete but unforced flexion. The test is considered positive if paresthesias are produced or increased within 60 seconds. The median nerve percussion test is done by gently tapping the skin over the median nerve just proximal to the distal palmar wrist crease. Provoked paresthesias in the median nerve distribution constitutes a positive test or Tinel's sign. Digital compression test is done by applying sustained firm pressure by the examiner's thumbs to the volar wrists over the median nerve at the distal palmar wrist crease. This test is an alternate to the wrist flexion test in case of painful or stiff wrist. Gellman et al<sup>46</sup> evaluated the usefulness of provocative tests used in diagnosing CTS and found the wrist flexion test to be the most sensitive while the nerve percussion test, although less sensitive, was most specific.

Decreased sensibility in the distribution of the median nerve and thenar muscle weakness are clinical signs of CTS. Tests of sensibility include threshold tests (Semmes-Weinestein monofilament, Vibrometry perception of 256 cps tuning fork) and innervation density tests (two point discrimination). Threshold tests are more consistent and reliable than innervation density tests in diagnosing CTS. The 256 cps tuning fork is struck against a firm object and its base is placed against the fingertips and compared to the digits of the contralateral hand. The test is considered positive when the patient

perceives less vibration. A Weber two-point discrimination test is compared on both hands in the median and ulnar nerve territories. A test is considered abnormal if recognition in the median nerve distribution and over the autonomous zone is greater than 6 mm.

Dynamic CTS is a mild condition where the symptoms are mainly activity-induced and the patient is otherwise asymptomatic with no detectable physical findings. In mild CTS the patient has intermittent symptoms with or without positive Phalen's test and Tinel's sign. Patients with moderate compression have frequent symptoms, decreased vibratory perception in the median nerve distribution, positive Phalen's test and Tinel's sign, increased two point discrimination, and weakness of the thenar muscles. In severe cases the symptoms are persistent and there is marked increase or absent two point discrimination and thenar muscle atrophy. The median nerve carries most of the symptomatic fibers to the hand. Therefore vasomotor symptoms may be encountered when the nerve is irritated or compressed. These may present as vascular symptoms, cold sensitivity, or skin changes.

### **Electrodiagnosis**

A motor unit consists of anterior horn cell, axon, and all muscle fibers innervated by that axon. The nerve and muscle cell membranes have selective permeability to charged ions and actively transport sodium from inside out and potassium in the opposite direction (sodium-potassium pump). This creates a potential difference (resting potential) that is maintained across the membrane. When this potential is reduced, a sudden change in the membrane permeability to sodium occurs that results in production of an action potential. This potential propagates continually along unmyelinated fibers and contrasts with the rapid conduction in myelinated fibers in which action potential jumps from one node to the next (Saltatory conduction).

The two components of electrodiagnostic testing are electromyography (EMG) and nerve conduction studies.<sup>2,3,47</sup> Electromyography detects and records electrical activity or potentials within a muscle in various phases of voluntary contraction. When the needle electrode is introduced in a muscle, a burst of potentials (insertional activity) is produced, the normal relaxed muscle is otherwise electrically silent. Weak voluntary contraction allows the recording of a few motor unit action potentials.

With increasing effort, more units are recruited until full interference is recorded with

maximum effort. Muscle denervation results in spontaneous potentials (positive sharp waves and fibrillations) along with a decrease in the recruitment and interference patterns on maximum voluntary effort. Polyphasic potentials are indicative of reinnervation. Nerve conduction studies are more useful than EMG in the diagnosis of CTS.

The process is one of stimulation and recording of sensory and motor conduction. In motor conduction, supramaximal stimulation of a nerve allows the recording of the amplitude and latency of the compound muscle action potential. The nerve conduction velocity is calculated from the results of stimulation at various sites along the nerve. An absent thenar motor response distal to stimulation site suggests severe nerve compression, which is infrequent in CTS. Increased latency and normal or slightly reduced amplitude suggests demyelination or axonal neuropathy. Increased latency and diminished conduction velocity across a nerve segment are suggestive of CN.

Similarly, in sensory conduction an action potential is recorded directly from the nerve in orthodromic or antidromic manner. Following early nerve injury and before Wallerian degeneration, normal conduction latencies along the distal segment may be present but there is usually a decrease in the sensory potential amplitude. Delayed terminal sensory latency is the most important parameter for diagnosing CTS. Nerve conduction standard values may vary from one laboratory to another. Asymmetry of conduction time between both hands of more than 0.5 m/sec for sensory conduction time or one m/sec for motor conduction time is considered abnormal. The criteria for positive electrodiagnostic results are motor latencies >4.0 ms, sensory latencies >3.5 ms, amplitude <20  $\mu$ , or conduction velocity <50 m/s with evidence of fibrillations. At the wrist the median nerve is composed of minority motor fibers and >90 percent sensory fibers. Sensory conduction is affected earlier and to a greater degree than motor conduction. Therefore it is logical to rely on the sensory more than motor conduction for diagnosing CTS.

Electrodiagnostic studies are a useful adjunct to clinical evaluation. False positive and false negative results are pitfalls of electrodiagnosis. Corwin and Kasdan<sup>48</sup> noted that over-diagnosis of CTS can occur if electrodiagnostic studies do not adhere to practice parameters recommended by three specialty societies. For example, results of nerve conduction studies can vary if the environmental temperature is not carefully con-

trolled. Anomalous innervations can also be a source of error. Similarly, patients with characteristic symptoms and clinical findings of CTS can have normal studies. Nerve conduction studies evaluate only the largest fastest conducting myelinated fibers. A substantial percentage of small fiber neuropathies will not be detected.

Despite the presence of nerve compression, nerve conduction studies can be normal as long as some fast conducting fibers remain intact. Normal electrodiagnostic studies therefore do not rule out CTS. The EMG needle samples only a few muscle fibers at the needle tip which may not be representative of the majority of that muscle. Electrodiagnostic studies provide information that is only as good as the skill of the electrodiagnostician performing the study and the perspicacity of the clinician in correlating the recordings with the clinical picture.

These tests can be costly and sometimes overutilized. They must not be used routinely in lieu of adequate history and physical examination. Electrodiagnostic tests neither make the diagnosis nor should they be used as the sole guide for surgical intervention. The results of these studies cannot be viewed in a vacuum; they should be correlated with the clinical picture and used only as an adjunct to a sound clinical judgment.

### Differential Diagnosis

The differential diagnosis of CTS includes vibration neuropathy,<sup>49</sup> polyneuropathy, amyotrophic lateral sclerosis, and vasospastic disorders.

Multifocal compression neuropathies: Double or multiple crush syndromes are due to entrapment of a single nerve at two or more levels.<sup>17</sup> When a nerve is compressed at one level it becomes more susceptible to compression further distally. Reversed double crush occurs when a distally compressed nerve becomes more susceptible to compression proximally. Double or multiple nerve entrapments are due to compression of two or more nerves in the same upper extremity.

Cervical radiculopathy: Cervical nerve root compression involving C<sub>5</sub> and C<sub>6</sub> is associated with neck pain and sensory manifestations in the radial forearm, thumb, and index finger. These patients can exhibit Spurling's sign where pain and neurologic symptoms are provoked by neck extension and lateral rotation.

Thoracic outlet syndrome: Brachial plexopathy symptoms are often aggravated by overhead activities.<sup>50</sup> Provocative positional maneuvers including hyperabduction, costoclavicular, and Adson's aid in the diagnosis.<sup>51</sup>

Pronator syndrome: Compression of the median nerve in the elbow and proximal forearm is usually associated with activity-induced daytime paresthesias as opposed to the nocturnal paresthesias of CTS. Provocative maneuvers, in particular Tinel's sign and a digital compression test at the proximal forearm, aid in confirming the diagnosis.

Digital nerve compression: Is caused by repeated direct pressure applied to the palm or digits. This relatively common condition can be misdiagnosed as carpal tunnel syndrome. The thumb is the most frequently affected digit (Bowler's thumb). The condition can be associated with stenosing tenosynovitis. The diagnosis is confirmed by tenderness and Tinel's sign localized to the palm, digits or thumb, and lack of response to CTS provocative maneuvers.

### Management

#### Nonoperative Treatment

The management of CTS is largely dependent on the cause, clinical type, symptom duration, and severity of entrapment. Nonoperative treatment can be successful in the majority of cases<sup>52</sup> and must be considered in most chronic cases of CTS. The initial treatment should include controlling any underlying systemic disease such as diabetes, hypothyroidism, or rheumatoid arthritis. The patient should be educated about the condition and modifying the method of using the hands in activities of daily living, work, hobbies, and sports. Other adjunctive treatment methods include: changing upper extremity positions, decreasing frequency of movements, periodic rest, using ergonomically-designed tools, work rotation, altering work stations, and rehabilitation of weak muscles.

In mild compression a regimen of wrist splinting and changing habits may suffice. In moderate compression the same apply along with a course of NSAIDS. If these measures do not help the patient's symptoms, local steroid injection should be considered. A patient with severe chronic compression who does not respond to nonoperative treatment is a candidate for operative decompression.

Carpal tunnel steroid injection has diagnostic and therapeutic value. Approximately 80 percent of patients will have transient favorable response to injection and 10 to 20 percent will have long lasting pain relief. Corticosteroid injection in the carpal tunnel utilizes a mixture of 0.5-1 ml of dexamethasone acetate in 2 ml of plain Xylocaine.® A 27-gauge needle is inserted into the carpal tunnel 1 cm proximal to the

wrist flexion crease, in line with the ring finger at 45° angle dorsally and 30° radially. The needle is advanced into the tunnel after pinching the skin at the injection site. If paresthesias are elicited the needle is withdrawn and the direction is changed. The solution is injected slowly. The wrist should be immobilized for two days following injection and the patient must avoid excessive use of the hand during that time. Frequent injections are not recommended.

Unproven methods of treating CTS are chiropractic manipulation, muscle stretching, diuretics, vitamins such as C and B<sub>6</sub>. The use of Vitamin B<sub>6</sub> in the treatment of CTS is a controversial issue. Experimentally Vitamin B<sub>6</sub> deficiency can cause neuropathy, but excessive intake of Vitamin B<sub>6</sub> can also cause neurotoxicity.<sup>47</sup> There is no concrete evidence that its use in clinical trials is efficacious. It is possible that the favorable response to pyridoxine is due to unrecognized peripheral neuropathy.

In a series of patients with CTS, nonoperative treatment was administered to 71 percent and surgical treatment was necessary for 29 percent of patients, and both groups achieved satisfactory results. Non-surgical treatment was completed in 43 percent of the patients within one year and 68 percent within two years.<sup>14</sup> In the Maine carpal tunnel study, 60 to 70 percent of CTS patients seen in hand surgeons' practices (not primary care clinic) who were treated non-operatively remained symptomatic. A population-based study showed 40 percent of non-operatively treated CTS patients continued to experience symptoms 2.5 years later.

### **Surgical Treatment**

Surgical treatment is indicated in severe chronic cases that fail to respond to nonoperative treatment especially when motor and sensory nerve deficits are clinically detectable and nerve conduction study are suggestive of severe compression. A prospective community-based treatment outcome study from Maine showed that surgically treated patients fared better than non-operatively treated patients in symptom severity and functional status.<sup>43</sup> The goal of surgical treatment is to decompress the nerve, facilitate excursion, and prevent progressive nerve damage. Nerve decompression can be achieved by surgically dividing the TCL and flexor retinaculum proximally and distally.

Adjunct procedures include epineurotomy, neurolysis, tenosynovectomy, tendon transfer, nerve transposition, and excision of space occupying lesion such as anomalous muscles or

tumors. Epineurotomy is a longitudinal incision of the thick constrictive epineurium in order to decompress intraneural fascicles, especially if normal nerve vascularity is not observed after releasing the tourniquet.<sup>1</sup> Epineurial decompression is achieved by evacuating a large subepineurial hematoma as in acute CTS. The presence of a hematoma within a nerve was found to be harmful and its evacuation has beneficial effect.<sup>54,55</sup> Chronic CTS complicating open injuries or fractures of distal radius may require external neurolysis within and proximal to the carpal tunnel.

There are two types of neurolysis, external and internal. External neurolysis is freeing the nerve from its bed and any surrounding extraneural scarring in order to restore its normal excursion. Internal neurolysis is division of the intraneural interfascicular scar tissue in order to relieve intrinsic axonal compression. Adjunctive internal neurolysis to CTR<sup>9,53</sup> has advocates and opponents, but it should not be done routinely. It is indicated in severe chronic cases, in the presence of intraneural scarring, and when the bands of Fontana are severely obscured with loss of normal architectural appearance of the nerve. Internal neurolysis should be done using microsurgical technique and magnification, preferably the operative microscope.

Despite the controversy surrounding internal neurolysis as an adjunct to CTR, this procedure can be done for other conditions safely if careful neurolysis is done by a trained microsurgeon using the operative microscope.

A comparative outcome study of operative and nonoperative treatments of CTS has shown that surgically treated patients demonstrated better results than non-surgical patients.<sup>43</sup> The measure of success for both nonsurgical and surgical treatments is patient satisfaction, which is a subjective criterion. Workers' compensation recipients had worse outcomes than non-recipients, but no significant difference was observed in treatment outcome between patients treated with endoscopic versus open carpal tunnel release.<sup>43</sup> One study showed that most patients will regain their preoperative grip strength three months after CTR and some patients' grip strength increases.<sup>56</sup> In my experience, grip strength recovery, however, may take six months.

The emergence of endoscopic CTR in the last decade has generated a great deal of publications, some in favor and others questioning the wisdom of using these techniques. Endoscopic CTR advocates believe that its advantages are shorter recovery time and less

morbidity. Open CTR proponents have shown that endoscopic CTR is more costly, involves a learning curve, and is associated with a greater complication rate.<sup>57</sup>

### Complications

Complications of nonoperative treatment include failure to recognize associated systemic disease and other neuropathies such as double crush or double entrapment and misdiagnosis for other peripheral nerve disorder such as polyneuropathy. Intraneural injection of steroid can lead to severe pain, paresthesias, dyesthesia, and symptoms of reflex sympathetic dystrophy. Fortunately most of these symptoms resolve spontaneously. If the symptoms persist, surgical exploration and microscopic internal neurolysis would be necessary to remove steroid crystals.

The complications of operative treatment differ for open versus endoscopic techniques. Complication rates as high as 18 percent for open CTR and 35 percent for endoscopic CTR<sup>58</sup> were described. Severance of median nerve branches such as PCB and thenar branch, or even the median and ulnar nerves were reported.<sup>58</sup>

Residual CTS following CTR is of two different varieties, persistent CTS and recurrent CTS.<sup>59</sup> Persistent CTS is due to incomplete decompression and the symptoms continue immediately after surgery, whereas in recurrent CTS the symptoms develop several months after surgery. Transient painful scar or pillar pain lasts for three months, whereas hypersensitive scar is due to injury of the palmar cutaneous branch or median nerve scarring and adherence. Thenar atrophy is due to injury of the recurrent motor branch. Superficial arterial palmar arch injury may lead to hematoma formation or vascular ischemia.

Flexor tendon bowstringing can develop following excision rather than incision of the TCL. Flexor tendon adherence may develop following tenosynovectomy. Reflex sympathetic dystrophy is infrequently encountered.

Residual symptoms following decompression associated with hypersensitive scar that do not respond to therapy and steroid injection can be treated with neuroma excision, neurolysis, and forearm fascia or palmaris brevis flap coverage of the nerve. Residual CTS, whether persistent or recurrent following endoscopic CTR, can often benefit from open CTR.<sup>59</sup> Persistent CTS following open CTR may benefit from another open CTR with complete division of TCL. Recurrent CTS following open CTR, especially in workers' compensation patients, in

the absence of definite provocative maneuvers and normal electrodiagnostic studies, may not benefit from another surgical procedure.

### Conclusion

Caution should be exercised against over utilization of expensive diagnostic procedures such as MRI that is rarely needed during the workup of CTS. Sensible management scheme should be adopted and conventional nonoperative treatment methods should be attempted before surgery. Adequate decompression of the nerve should provide considerable relief of symptoms in most patients. The postoperative complication rate can be minimized if sound judgment is exercised in patient selection combined with knowledge of the anatomy and gentle handling of the tissues. Only when rational management approach to CTS is adopted, the impact of its vexing economic dilemma will be ameliorated. J

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## Substance Use Disorders in Physician Training Programs

William H. Yarborough, MD

Physician impairment due to substance use occurs in all age groups of physicians. Risk factors are similar for age-matched controls, but choice of substance may be influenced by specialty and narcotic permit. Alcohol is by far the most commonly abused drug involved. One of the last areas of performance affected is work. Other areas may provide earlier clues. Intervention and referral to appropriate treatment centers is important. Death rates are relatively high in this disease. We report a favorable outcome of 75 percent at The University of Oklahoma Health Sciences Center, Tulsa (OUHSC-T), but a death rate of 16.7 percent in our small sample. Aftercare and monitoring are essential to a successful outcome. The vast majority of physicians in training can complete their training with appropriate treatment and monitoring and go on to successful careers.

Physician impairment can be defined by conditions that render physicians unable to perform their profession with reasonable skill and safety because of medical disease, psychiatric disorders, or substance use disorders.<sup>1</sup> This discussion primarily focuses on substance use disorders.

Physician impairment due to substance use disorders has affected many physicians throughout the years.<sup>2</sup> Sigmund Freud and William Halstad<sup>1</sup> being among the most famous. One of the founders of Alcoholics Anonymous, a program that has saved thousands of lives, was a "hopeless" alcoholic before he and a stockbroker came up with the 12 steps.<sup>4</sup> In fact, it may almost seem in the case of Freud and Halstad that their drug use did not have a great deal of negative effect on their work, despite their personal suffering.<sup>3</sup>

In 1920, the English Parliament passed the Dangerous Drug Control Act in an attempt to

control addiction through the registration of addicts. Twenty-five percent of the addicts who registered were doctors, dentists, nurses, or veterinary surgeons.<sup>2</sup> Throughout the first half of the century, laws helped form the public view of addiction as a legal and social issue rather than a medical disease.<sup>5</sup> Addiction is, in reality, primarily a brain disease with the hallmark being an extreme sensitivity to certain mood altering substances that after repeated exposure leads to the behavioral symptoms seen in addiction.<sup>1</sup> In other words, in the setting of genetic tendency (variable), exposure to the substance and environmental factors, the "disease" takes over.

The addict brain is essentially hard-wired for this result. Since the report issued in 1973 by the AMA entitled "Sick Physician"<sup>6</sup> the conceptualization of impaired physicians as a medical rather than legal, moral, or ethical problem has led to the development of programs and policies that integrate medical rehabilitation with professional peer review.

### Risk Factors

Much of the information on substance use disorders is based on myths and folklore. The stories regarding, for instance, access to drugs being a factor certainly influence the type of drugs used, but does not appear to be an independent risk factor. In fact by far the most commonly abused drug among physicians as well as residents is alcohol (freely available to all). Job stress<sup>7</sup> does not appear either to be an independent factor, although some specialties such as emergency medicine and anesthesiology residency programs have an increased incidence.<sup>8,9</sup> Many studies have been published postulating unique risk factors for physicians, but in reality family history, drug use (such as alcohol or

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marijuana) at a young age, and the ability to tolerate large amounts of alcohol at a young age are the best predictors.<sup>10</sup>

### **Epidemiology**

Estimates of the prevalence of substance use disorders in physicians range from 7 to 15 percent;<sup>8</sup> this is similar to the general population. Alcohol accounts for more than 50 percent of cases, with opioids being the next most common.<sup>8</sup> Cocaine and marijuana are the most common illegal drugs used. Benzodiazepines are usually abused in combination with alcohol or cocaine and are fairly unusual as a primary drug of abuse among physicians.

A Canadian study<sup>11</sup> with a cohort of 215 resident physicians found 14 percent exhibited pathologic alcohol use, three percent exhibited social or occupational impairment, and three percent exhibited both. Marijuana was the most common abused drug.

A 1991 study<sup>12</sup> published in *JAMA* with a stratified random sample of 1,785 physicians in the third year of residency training showed that 87 percent of the subjects used alcohol in the past month with five percent reporting daily use of alcohol. Seven percent reported using marijuana. Cocaine, benzodiazepines, amphetamine, and opiate use was reported in less than 3 percent of the group. In the same study, male alcohol use was higher than age-matched peers, but illicit drug use was lower. Interestingly enough, the use of opiates and benzodiazepines correlated with receiving controlled prescribing privileges.

Another more recent study of 654 physicians<sup>8</sup> with substance use disorders in four states turned up 53 residents or fellows. Again, the most common drug of abuse was alcohol.

Hughes<sup>9</sup> showed that emergency medicine and psychiatry residents had higher rates of substance use disorders. Surgery residents in general had a lower rate of substance use disorders.<sup>13</sup> Internal medicine physicians are slightly under represented in impaired groups.<sup>8,14</sup>

A study of 67 emergency medicine residency program directors<sup>15</sup> revealed only one-third of these directors had identified a substance-dependent resident in their program and estimates that only 1 percent of their current residents had an alcohol problem. This was contrasted with the results of a survey of emergency medicine residents using CAGE scores revealing suspected alcoholism in 12.5 percent of residents surveyed. A study in 1992 showed that substance use was not a major response to residency stress.<sup>7</sup>

A study in 1992<sup>9</sup> involving anesthesiology residents showed that out of 180 cases, 26 residents died of the disease for a death rate of more than 14 percent.

In summary, substance use disorders would be expected to be similar to age-matched populations. Illicit drug use is possibly lower, but prescription drug misuse starts to rise as residency progresses. Death rates seem relatively high.

### **Results of Study at OUHSC-Tulsa**

We have identified 13 cases of substance use disorders since 1992 among residents and medical students. This was distributed among all programs except surgery. Follow-up ranged from a few months to seven years. At the time of writing, one is in treatment. Of the 12 who have completed treatment, eight are doing well, completed residency or medical school and are working without known relapse. One has had some minor difficulty, but is currently working for a favorable outcome of 75 percent. One, at last report, had dropped out of medicine and two have died. This reflects a mortality rate of 16.7 percent. This mortality rate is similar to what others in this article have reported.

### **Discussion: Signs and Symptoms of Substance Use Disorders in Physicians**

It is important to note that one of the last things to suffer in substance use disorders is job performance.<sup>16,17</sup> Early symptoms<sup>1,18,19</sup> may include habitual lateness, slow response, or non-responsiveness to pages. Rumors of family strife or affairs may be apparent. Heavy drinking and intoxication are noted at social events. Legal issues such as DUI or public intoxication arise. Late symptoms may include a decrease in quality of work, ignored pages, fights with emergency staff and other physicians, patient complaints, suspicion of drug stealing, excessive or inconsistent prescribing of controlled drugs, deterioration in hygiene and personal dress, as well as becoming very unreliable and unpredictable.

Urine screening may be helpful in diagnosis, but the presence of several of these above listed symptoms justify evaluation even in the presence of negative urine screens. Physicians are infamous for devising unique ways to beat drug screens or may be abusing drugs that are not readily detectable in the urine.

### Interventions

With the advent of physician recovery programs, more physicians actually voluntarily seek help for substance use. The ability to avoid sanctions in the last few years if early treatment is sought is probably an influence.<sup>16</sup>

Formal intervention<sup>1,17</sup> is a medical procedure that has become both a science and an art. Improper or amateurish intervention, like with other medical procedures, may even be harmful. Intervention is necessary when a physician is either unaware of the addiction, or in the case of severe denial, is psychologically unable to recognize the seriousness of the disease. Denial is often severe and the addicted individual will often have little insight into their disease and their need for treatment.

Successful intervention would include, when available, an addictionist familiar with physician health issues. Significant individuals such as spouse, program director, close friends or colleagues, or departmental chairs would all be appropriate. The leader of the intervention should exclude resentful or hostile individuals or those appearing emotionally unstable. Emotional appeals are rarely successful. Recovering physicians of similar age and drug of choice may be very helpful.

The individual should be presented with clear evidence of their behavior. Rumor and gossip should be avoided. Coercion should be reserved for when other techniques have failed. It may also be appropriate to conduct the intervention away from work. The individual should not be grossly intoxicated and adequate time should be available.

Goals of the intervention should be established depending on the physician's condition and fitness to practice. In most situations, getting the resident to consent to an evaluation in a specialized center should be a minimal goal. In situations when the diagnosis is beyond question, treatment should be the primary goal. If recommendations are refused, a back-up plan should have been established ahead of time. In some cases a behavioral contract may be appropriate, so that the next incidence may trigger another intervention. This may be acceptable only when the diagnosis is in doubt or when there is no apparent imminent danger to themselves or to the public.

In advanced situations, termination and possibly reporting the individual to proper authorities is appropriate. This is not to punish, but to take coercion to the next level as well as protecting the public. The physician's health pro-

gram should also be made aware early to assist in tracking the individual.

Intervention sometimes must be repeated. Even when the individual does not initially accept the information presented, the intervention is not a total failure, for a seed has been planted. He or she at least has become aware of this problem and knows where to turn for help.

### Evaluation and Treatment

Evaluation should be performed in centers with expertise and experience of dealing with physicians.<sup>16</sup> Evaluation should include neuropsychological testing, psychiatric evaluation, addiction medicine evaluation, family dynamics, as well as a medical evaluation.

Treatment should in almost all cases be done in a center specializing in the treatment of health care professionals. There are such centers in most regions of the country, as well as Canada. Treatment usually varies from 60 days to 12 months. Treating the impaired physician in a peer group setting appears to facilitate the recovery process.<sup>16</sup> Programs that use 12-step principles seem to have the best outcomes.<sup>18,19,20</sup>

Most state recovery programs have reported successful outcomes. One state program<sup>21</sup> studied physicians treated in various types of treatment. Physicians treated in a specialized center for three to four months had two to three times better outcome than those treated in community-based 30-day treatment programs or those treated in outpatient programs. Most state physician recovery programs now report a five-year success rate of greater than 75 percent; some as high as 95 percent.<sup>22-25</sup> Relapsing physicians have a higher incidence of Axis II disorders.<sup>8</sup>

### Aftercare and Monitoring

Addiction is a chronic, potentially relapsing disease.<sup>1</sup> Aftercare and monitoring are essential for a successful outcome.<sup>16</sup> Monitoring should not be done with punitive overtones, but should be seen as a part of a continuing successful treatment program. Monitoring for health care professionals should be supervised by an addictionist with knowledge of urine screening. Initially, face-to-face meetings with a monitor should occur at least monthly. Documentation of continuing care and 12-step meetings can be accomplished through the monitor. Urine screening should be random and initially as frequent as once weekly.

Recovery is a long-term process with clearly defined stages. For this reason, the monitoring should be left to a physician with clear training

and experience in the recovery process. Some studies<sup>8</sup> suggest that urine screening picks up only about 50 percent of relapses.

Professional monitoring programs often pick up on relapse before the urine screen. If done well,<sup>8</sup> most relapses can be picked up early on, as high as 50 percent in the first week. This is important not only for public safety, but relapses are commonly fatal. The quicker detection may save lives. Monitoring of some sort generally should continue for five years. There is evidence that five-year relapse rates are very low and monitoring may be suspended.<sup>16,18,19</sup>

Monitoring for the emergence of compulsive behaviors involving sex, work, food, nicotine, gambling, etc. should be monitored.<sup>1</sup>

Residents in recovery should be required to participate in their state's physician recovery program. These programs generally sponsor support groups and provide assistance or advocacy with licensing agencies, hospital staffs, and managed care organizations. They may also be able to assist with intervention and, in some cases, provide monitoring services.

Recovery contracts should be negotiated with the resident on return from treatment.<sup>16</sup> This will usually be based on recommendations of the treatment center, but additional conditions may be added to the contract by the program. Consequences of non-compliance should be spelled out clearly.

Medical schools and residency programs should consider forming physician health committees to assist with monitoring, intervention, and treatment referrals. They may provide a safe haven for those seeking help.

## Conclusion

1. Individuals with the disease of addiction are present in most residency programs and medical schools. Early intervention and treatment will save lives and careers, as well as protect the public. Programs should provide a mechanism for this to occur in a non-punitive manner.
2. Treatment does work. Specialized centers can achieve success rates of greater than 90 percent.
3. Long-term recovery is greatly facilitated by monitoring and aftercare.
4. Re-entry into training is very important. An experienced physician that deals regularly with recovering individuals should follow the resident.

5. Death rates are high. Death occurs most commonly in relapse and failed intervention.
6. The vast majority of medical students or residents that complete appropriate treatment and are effectively monitored will successfully complete training and go on to a fruitful career.

## The Author

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# THE CONNECTED CLINICIAN

## **Caveat Lector: Getting Quality Out of the Internet**

Chris Candler, MD

In a previous article I discussed the physician's need to effectively manage the sea of information that populates their daily activities. In the current article I discuss quality issues of online resources.

The recent explosion of the Internet heralds new promises of information access and retrieval. The advent of the World Wide Web has provided both physicians and patients alike an opportunity to browse immeasurable libraries of information including books, journals, clinical alerts, practice guidelines, and educational resources. New web-based tools empower physicians with evidence to better manage patients with the latest substantiated data. These and other online technologies have the added ability to connect the physician with information where and when it is needed, even at the point of patient care. Given the rapid growth of online medical information and the complexity of today's healthcare environment, such tools may one day supplant traditional paper-based methods of information retrieval.

Lacking central control, the Web is structured and distributed such that anyone with an Internet connection and access to a server can "publish" information on the Internet for the entire world to see. Unfortunately, the lack of editorial oversight or peer review mechanism allows boundless opportunity to disseminate incomplete, deceptive, and erroneous information. This near limitless freedom of expression permits virtually anyone (supporting any agenda) with an opportunity to be heard. Still, the issue of quality is not unique to this new medium. Print, radio, and television have each contributed to the widespread propagation of dubious medical information. As always, the rule of caveat lector applies: it is up to the reader's critical eye to discern quality and validity.

Regrettably, the lack of a gatekeeper has impelled many clinicians to discount the Internet as a substandard collection of unorganized and valueless claptrap. While this may be true for many web sites, there are scores of legitimate and valuable resources available for free or at a reasonable cost. Increasingly, online journals offer some kind of web presence, many allowing full text access to subscribers. The National Library of Medicine hosts the free PubMed search engine that offers links to numerous full-text articles (some of which may require registration and/or purchase). Other, more comprehensive "portal" web sites such as MD Consult and Medscape®<sup>2</sup> contain information that has been filtered and integrated for easy access and retrieval. These portal sites contain useful information such as treatment updates, conference schedules, drug information, selected journals and classic reference texts. Additionally, most of these resources are carefully indexed and fully searchable via one simple interface.

The scientific community has recognized the power of the Internet as a fast and economical alternative to conventional printed journals. The biomedical publishing paradigm is in the midst of a major electronic transformation epitomized by the global emergence of online journals. At the divisive forefront is the NIH E-biomed proposal<sup>3</sup>, seeking to provide a more effective way of disseminating biomedical research to clinicians and investigators. By reducing temporal, financial, and logistical barriers, the proposed E-biomed clearinghouse aims to provide more open and unified access to biomedical information. Through a robust yet flexible review and endorsement model, viewers would have the option to browse articles that would not have

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been available via traditional peer review methods, such as failed experiments, ineffective clinical trials, and other articles that had value but didn't make the final cut. The availability of this new and expanded body of information will oblige physicians to further develop their critical eye.

Unfortunately, there are countless web sites beyond the brand-familiar portals, repositories, and online journal sites. Such sites are often more difficult for the clinician or the patient to judge. Luckily, the same measures used to discern credibility in the print medium can be applied to the Web. Silberg et al's criteria<sup>4</sup> can provide physicians with a reasonably straightforward set of principles by which to judge online resources:

- Authorship - all authors and credentials should be clearly identified.
- Attribution - all citations and references should be obviously and completely documented.
- Disclosure - all commercial affiliations and sponsorship should be revealed in addition to any conflicts of interest. Viewers should watch for advertisement banners that may be inappropriately related to the article.
- Currency - the article should be labeled with a creation date as well as a revision history if the article has been updated in any way.

Incomplete or unsuitable evidence, lack of corroboration, and an inappropriate tone are indicators of poor quality. Just as in traditional journal appraisal, applying these measures to critical web site review is a conscious and learned skill.

The Health on the Net Code of Conduct (HONcode) has been offered as seal of approval for web sites that adhere to a set of principles

regarding the source and purpose of information, including appropriate disclosure and correct citations.<sup>5</sup> By answering a short questionnaire, authors may determine whether or not they meet the criteria to display the HONcode brand on their web site. However, this branding is a self-governance initiative and does not include provisions for a formal review process. In addition, other online organizations have begun similar initiatives in an effort to standardize quality behaviors of information providers. While such standards of credibility do not approach the quality control found through a rigorous peer review process, they may be more realistic than a globally centralized quality control organization or process.

Clearly, the Internet embodies a heterogeneous and expanding source of clinical information accessible by patients and providers. Scattered throughout the bewildering sea of questionable web sites are valuable resources and tools that can provide decisive information at the critical point of care. However, identifying substantiated information is a learned skill that requires physician diligence and a critical eye. Fortunately, the same benchmarks of quality used in print media can be useful in the online realm. This new world of information is too great and too valuable to ignore. □

#### **The Author**

Chris Candler, MD, is the director of the Office of Educational Development and Research at the University of Oklahoma College of Medicine.

#### **Suggested Readings**

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# NEWS

## OFMQ Announces Fall Regional Conference

The Oklahoma Foundation for Medical Quality (OFMQ) will host its third annual Regional Conference October 28 and 29 in Oklahoma City and Tulsa, respectively.

*"The Future Is Now—Collaborating for Success"* is the theme of the identical one-day conferences. Attendees will be provided a preview of the comprehensive national projects which comprise the Health Care Financing Administration's Sixth Scope of Work, which begins February 1, 2000, in Oklahoma. The Sixth Scope encompasses more than six national quality improvement projects which will be underway over the next three years to improve the care of Medicare beneficiaries in key clinical topic areas: pneumonia, diabetes, acute myocardial infarction, heart failure, stroke, and breast cancer. The new Payment Error Prevention Program (PEPP) will also be discussed.

The morning keynote speaker will be Gordon H. Deckert, MD, who will provide an overview of the state of the state's health, including health trends over the last two decades and strategies to improve the status of Oklahoma's health. Other features of the conference include breakout sessions and a variety of topics pertinent to quality improvement in Medicare, Medicaid, and behavioral health. The conference will conclude with the presentation of the 1999 Quality Awards.

Physicians are encouraged to attend, and certificates for Category II CEUs will be provided. The conference, for which the OSMA is a sponsor, will be offered for a \$30 fee. The Oklahoma City meeting will be held at the Embassy Suites Hotel, and the Tulsa meeting will be held at the Adam's Mark Hotel. For more information about the conference, contact Michele Clark at OFMQ, 405/840-2891 or 800 522-3414.

## Annual Medical Student Picnic Held at Bricktown Ballpark

The OSMA and AMA co-hosted this year's annual picnic to welcome first-year medical students and recruit members for both associations. Held August 20 at the Southwestern Bell Bricktown Ballpark in Oklahoma City, more than 250 attended, taking in the Oklahoma Redhawks-Las Vegas Stars game and a barbecue dinner.

More than 115 first-year medical students joined OSMA through the Medical Student Section Orientation and the OSMA/AMA picnic, contributing to the increase in student membership the OSMA has experienced this year.



## Board of Trustees Passes Motion on Tobacco Settlement Funds

During the August 29 meeting of the OSMA Board of Trustees, a motion was passed stating that, although OSMA policy supports that all Tobacco Settlement Funds go to programs for prevention, cessation, tobacco-related diseases and research, the OSMA Board authorizes the Chair of the Council on State Legislation to negotiate for the maximum amount of tobacco settlement funds to achieve these purposes and supports the participation in coalitions toward that end; and that OSMA make the tobacco settlement issue the top legislative priority for the 2000 session.

## Distinguished Lecture in Toxicology to be Held October 11

The Oklahoma Center for Toxicology 1999 Distinguished Lecture in Toxicology will feature John D. Groopman, an expert on environmental carcinogens, food contaminants that may trigger liver cancer, and the link between hepatitis and liver cancer. Groopman will speak on "Mechanism-Based Biomarkers for Human Cancer Prevention" at noon on Monday, October 11, in the auditorium of the Robert Bird Library on the OUHSC Oklahoma City campus. For additional information, call 405/271-6593.

## AMA Announces Next Steps in Creating a National Negotiating Organization for Employed Physicians

The American Medical Association (AMA) has taken key steps toward creating a national negotiating organization for employed physicians, recommending a name, selecting initial members of a governing body, and recommending a constitution for the new organization. The new independent organization will be named Physicians for Responsible Negotiations (PRN). The acronym PRN is widely understood among physicians to mean "as needed."

"This new organization will represent employed physicians and eligible resident physicians and be the strong voice of organized medicine exactly where it's needed—at the bargaining table," said AMA President Thomas R. Reardon, MD. "The intent of PRN is to allow physicians to advocate effectively for their patients and ensure quality care."

The AMA Board of Trustees named five members to serve on PRN's governing body. Those five members will interview and select the remainder of its governing

committee, which is expected to number between nine and 12. Appointed to the PRN governing board are: Susan Hershberg Adelman, MD, a pediatric surgeon from Southfield, MI; John C. Nelson, MD, an obstetrician and gynecologist from Salt Lake City, UT; Andrew Thomas, MD, an internist from Columbus, OH; Ross Rubin, an attorney and Vice President for Legislative Affairs of the American Medical Association from Chicago, IL; and Todd Vande Hey, Vice President, Private Sector Advocacy, American Medical Association, Chicago.

The AMA Board also recommended a constitution under which PRN will be governed. The preamble of that constitution states, in part, that PRN will "advocate on behalf of our members, with their employers and others, as the law allows, to create and maintain a health care system that guarantees all our members a working atmosphere where they can devote the time and attention their patients need."

## OMRF to Present Series of Free Public Lectures

The Oklahoma Medical Research Foundation (OMRF) will present "From Bench to Bedside: Biomedicine at the New Millennium," a series of free public lectures beginning October 7.

Biomedical researchers from OMRF will explain the latest research in easily understood terms for the general public. The first lecture, "Can a Common Virus Cause Lupus?" will be given by Judith James, MD, PhD, assistant member of the Arthritis and Immunology Research Program on October 7. On October 21, Rodger McEver, MD, member of the Cardiovascular Biology Research Program and professor of medicine at the OU Health Sciences Center, will present "Heart Health: The Two-Edged Sword of White Blood Cells." The final lecture, to be held October 28, will be given by J. Donald Capra, MD, immunologist and president of OMRF, on "Winning the War on Germs: A Historical Perspective."

All lectures will begin at 7 pm at Westminster Presbyterian Church, 4400 N. Shartel. For more information, call 405/271-9403.



*OMRF researchers Judith James, MD (top); Rodger McEver, MD (right); and J. Donald Capra, MD (bottom) will present a series of free public lectures beginning October 7.*

## Legal Services and Information Available to OSMA Members

OSMA's contract law firm, Hartzog Conger & Cason, has established a toll-free phone number to facilitate access to legal services for OSMA members practicing outside the greater Oklahoma City metro area. The number is 800/632-8058.

Hartzog Conger & Cason has also developed an outline for fraud and abuse compliance for physicians and their office staff to aid in developing and implementing compliance programs specific to their practices. To request a copy of the outline, please contact the OSMA at 800/522-9452.

## AMA Annual Meeting: Results of OSMA Resolutions

The following specific actions were taken by the AMA House of Delegates on seven resolutions introduced by the OSMA Delegation.

### Resolution 131—Patient Choice in Medicare Reform

**Resolved,** That the American Medical Association actively lobby the Congress of the United States for legislation providing Medicare beneficiaries with the option to purchase their own private health insurance; and be it further

**Resolved,** That the AMA advocate the creation of an independent Medicare "Benefits Board," appointed by both the Administration and Congress, which would specify the detailed benefits, subject to an up-or-down vote by Congress.

**AMA Action:** Reaffirmed AMA policies H-165.980 and H-330.968 in lieu of Resolution 131

### Resolution 213—Fraud and Abuse

**Resolved,** The Oklahoma State Medical Association commends the AMA for its efforts to combat the new AARP-HHS initiative against alleged health care fraud and abuse, and be it further

**Resolved,** That the AMA used all possible legal remedies to defeat this misguided and poorly conceived attempt by the AARP and HHS to reduce alleged health care fraud and abuse.

**AMA Action:** Reaffirmed current AMA policy

### Resolution 215—Federal Tax Legislation

**Resolved,** That the AMA actively advocate AMA policy H-165.920, which supports the development of Federal Tax legislation which would encourage the independent purchase of health insurance by individuals and families.

**AMA Action:** Adopted

### Resolution 609—Training for AMA Delegates/Alternates

**Resolved,** That the Speaker of the AMA House of Delegates review immediately develop the a formal training program for all delegates and alternate delegates to ensure that the program thoroughly familiarizes them delegates and alternate delegates with the proper role, responsibilities and requirements expectations of what is required to be an effective delegate; and, be it further

**Resolved,** That the AMA Delegate/Alternate Training Program include special emphasis on a delegate's responsibilities before and after an AMA meeting, including responsibilities regarding membership and the communication of policy actions by the House of Delegates.

**AMA Action:** Adopted as Amended

### Resolution 714 (changed to 141)—Local Medical Review Policies

**Resolved,** That our AMA continue to seek repeal of medical necessity documentation requirements for laboratory work; and be it further

**Resolved,** That if outright repeal of medical necessity documentation requirements for laboratory work is not possible in any given session of Congress, then our AMA seek by legislative or judicial means the immediate termination of local medical review policies for laboratory work.

**AMA Action:** Reaffirmed existing AMA policy

### Resolution 820—Abuse of the Medical Record for Regulation or Financing the Practice of Medicine

**Resolved,** That the our American Medical Association, as the traditional representative of organized medicine, continue the efforts it began in 1998 to oppose the use of the physician office medical record as a tool of the Health Care Financing Administration, as well as any other agency or third party,

to regulate the financing and practice of medicine; and be it further

**Resolved,** That the AMA serve notice with passage of this resolution that the physicians of America are taking back the Medical Record and That the said medical record shall be the sole property of the patient and physician and the information contained therein the property of the patient will be used solely to document the delivery of health care; and be it further  
**Resolved,** That the AMA develop a public education campaign to inform the American public on the importance of the confidentiality of the Medical Record. That the physician's office medical record should be used solely to document the delivery of health care.

**AMA Action:** Adopted as Amended Substitute Resolution 820 (w/change in title)

### In Closing—Jay A. Gregory, MD, Chair

On a personal note I wish to express my sincere thanks to the OSMA Board of Trustees, my fellow Delegates and Alternates, Alliance members, and all of those members of the OSMA who supported me in my efforts for election to the AMA Board of Trustees.

Although unsuccessful, we "fought the good fight" and I will continue to represent the best interest of Oklahoma physicians and our patients for as long as I have the privilege of serving as an AMA Delegate from Oklahoma.

The AMA Interim Meeting will be held December 4-8, 1999 in San Diego, California. The AMA Delegation requests that any resolutions from OSMA members be forwarded to Brian Foy, OSMA Executive Director, prior to October 29, 1999.

## Folic Acid to Prevent Recurrence of Neural Tube Defects

By Kay Pearson, M.S., R.D., L.D.  
Oklahoma Birth Defects Registry Coordinator  
Oklahoma State Department of Health

The Oklahoma State Department of Health (OSDH) and March of Dimes Birth Defects Foundation are collaborating in an extensive public health effort to reduce the recurrence of neural tube defects in Oklahoma. Neural tube defects (NTDs), spina bifida and anencephaly are devastating birth defects that negatively impact families and society.

NTDs occur when the embryonic neural tube fails to close at 26 to 28 days postconception, before most women realize they are pregnant. The burden of illness is extreme. In the most severe forms of NTD, anencephaly, infants die shortly after birth. With the help of medical care, babies born with spina bifida reach adulthood, but may suffer from varying degrees of disability related to paralysis, bowel and bladder incontinence and hydrocephalus. An estimated 75 percent of all children with spina bifida have learning disabilities.

Provisional statewide data from the Oklahoma Birth Defects

Registry for 1994 through 1996 estimate there were four cases of NTDs each month in Oklahoma, 1.4 anencephaly and 2.9 spina bifida. The national cost of medical and non-medical care related to spina bifida has been estimated at \$324,000 per case.

In 1991, the U.S. Public Health Service (USPHS) issued a recommendation for women who have had a previous pregnancy affected by an NTD to consume 0.4 milligrams (400 micrograms) of folic acid every day throughout their childbearing years. When planning future pregnancies, women should be aware that one month before conception, and for the first three months of pregnancy, they need to increase the amount of folic acid ten-fold, to 4.0 milligrams each day. *This level can only be obtained through a doctor's prescription.*

Any physician, regardless of specialty, may encounter women who have had a child or a pregnancy affected by an NTD. *All physicians need to be aware of this important message to reduce birth defects in our state.*

To increase the likelihood that this message will reach all women who have had a previous pregnancy affected by an NTD, the Oklahoma State Medical Association and the Oklahoma State Department of Health will send educational mailings to health care providers and women at risk. First, all physicians in Oklahoma will be sent a copy of the USPHS recommendation for reducing recurrence of NTDs. Second, beginning in January 2000, any woman identified through the Oklahoma Birth Defects Registry as delivering a live birth or stillbirth affected by an NTD will receive a letter informing them of their increased need for folic acid. Also included in this mailing will be a copy of the USPHS recommendation as well as information for scheduling free genetic telephone counseling through the Children's Hospital of Oklahoma, Department of Genetics.

The opportunity for this statewide educational effort is made possible through a grant awarded to the OSDH from the Centers for Disease Control and Prevention.

### At a Glance: NTD Recurrence Prevention in Oklahoma

Statewide data from the Oklahoma Birth Defects Registry estimate four cases of NTDs each month in Oklahoma—1.4 anencephaly and 2.9 spina bifida.

The US Public Health Service recommends women who have had a previous pregnancy affected by an NTD to consume 0.4 milligrams of folic acid every day throughout their childbearing years. Women planning a future pregnancy should increase the amount of folic acid to 4.0 milligrams each day one month before conception and the first three months of pregnancy.

All physicians in Oklahoma will be sent a copy of the USPHS recommendation on reducing the recurrence of NTDs.

Beginning in January 2000, any woman identified through the Oklahoma Birth Defects Registry as delivering a live birth or stillbirth affected by an NTD will receive a letter informing them of their increased need for folic acid.

## Emergent Disease Notification System

By Michael Crutcher, M.D., M.P.H.  
State Epidemiologist

&  
Laura M.K. Smithee, M.S.  
Director, Communicable Disease Control Division  
Oklahoma State Department of Health

The Communicable Disease Division (CDD) within the Oklahoma State Department of Health has established an emergent disease notification system for primary care physicians, hospital infection control practitioners, and hospital laboratories. The purpose of this notification system is to be able to rapidly alert practitioners proximate to an outbreak or cluster of disease of the event and provide information on the disease as well as up-to-date information on the status of the investigation, make recommendations concerning prophylaxis, request specimen collection, etc.

The CDD has previously sent a letter to all Oklahoma MDs and DOs who are in General Practice, Family Practice, Internal Medicine, Pediatrics, Emergency Medicine, or Infectious Disease. We received a good response from physicians in this group who would like to participate in the network. If we missed you, and you would like to participate, please complete the form below. You may fax the form to the CDD at 405/271-6680, or mail the form to:

Communicable Disease Division  
Oklahoma State Department of Health  
1000 N.E. Tenth Street  
Oklahoma City, OK 73117-1299

### Emergent Disease Notification System

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Name of Facility/Clinic: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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## OBITUARIES



### **Dave B. Lhevine, MD** **1922-1999**

Dave B. Lhevine, MD, died July 31, 1999. Born May 20, 1922, in Tulsa, he received his medical degree from the University of Oklahoma in 1945. He served active duty in the United States Navy from 1945-1947 as a Lieutenant Junior Grade Medical Officer. Dr. Lhevine was a member of the Board of Directors of Hillcrest Medical Center Foundation, and a life member of the Oklahoma State Medical Association since 1985.



### **Michael Allan Houghton, MD** **1945-1999**

Michael Allan Houghton, MD, died August 16, 1999. Dr. Houghton was born March 17, 1945, in Dallas; he received his medical degree from American University of the Caribbean in Montserrat in 1982. A family practice physician in Wewoka, Dr. Houghton was a member of the Oklahoma State Medical Association.



### **Webb M. Thompson, Jr., MD** **1922-1999**

Webb M. Thompson, Jr., MD, died August 20, 1999. Born July 11, 1922, in Hume, Virginia, Dr. Thompson served in the United States Naval Reserve during World War II. In 1954, he received his medical degree from the University of Virginia Medical School. Dr. Thompson served as both chief of staff and medical director of Children's Hospital, and was named a life member of the Oklahoma State Medical Association in 1995.

## IN MEMORIAM

### 1998

|                              |             |
|------------------------------|-------------|
| Alfred A. Hellams, MD .....  | October 4   |
| Sumner Y. Andelman, MD ..... | October 6   |
| Eric B. Meador, MD .....     | October 10  |
| Vance A. Bradford, MD .....  | October 23  |
| Joseph S. Raff, MD .....     | November 12 |
| Herbert J. Forrest, MD ..... | November 14 |
| Joseph N. Mitchell, MD ..... | December 23 |

### 1999

|                                  |            |
|----------------------------------|------------|
| Thomas Edward Rhea, MD .....     | January 2  |
| H. Ben Yagol, MD .....           | January 19 |
| Fay Knickerbocker, MD .....      | February 6 |
| Ramon G. Blanco, MD .....        | March 5    |
| Neal A. Pickett, Jr., MD .....   | March 14   |
| Henry D. Wolfe, MD .....         | March 29   |
| Winfred L. Medcalf, MD .....     | April 1    |
| Robert P. Dennis, MD .....       | April 6    |
| Emil F. Stratton, MD .....       | April 7    |
| Carl W. Smith, Jr., MD .....     | April 8    |
| George L. Hill, MD .....         | April 20   |
| Jim M. Taylor, MD .....          | April 28   |
| T. Jeff Williams, MD .....       | May 17     |
| Thomas Ross Ahrend, MD .....     | May 23     |
| Lawrence E.C. Joers, MD .....    | June 5     |
| Hyman J. Drell, MD .....         | July 15    |
| Lee Bailey Word, MD .....        | July 22    |
| Dave B. Lhevine, MD .....        | July 31    |
| Michael Allan Houghton, MD ..... | August 16  |
| Webb M. Thompson, Jr., MD .....  | August 20  |

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## The Rules Have to Change

To the Editor:

The editorial in August's OSMA *Journal* "Doctoring by Union Rules" by Dr. Pontious struck a sensitive nerve. I think we are naïve and I think someone has changed the rules. There was a time when physicians were a "learned profession" and held in high regard, not only by their patients but by government, insurance companies and hospitals. With the Supreme Court decision in *Goldfab v the Virginia State Bar Association* 30 years ago, medicine lost its learned profession status and became another trade. I certainly do not agree with this but that is what the courts say and that is the way we have been treated for the last 30 years.

Why do people join unions?

Because they feel powerless. As I read the editorial I had several contracts on my desk from hospitals, insurance companies and HMOs asking me to bid for subspecialty services. It is hard to know what to do. On one hand the HMOs can pool their resources and all have access to each other's statistics, but if we, as physicians, get together to discuss fees and services, we are in

violation of law. The rules have to change. I can remember when the adage "if you take good care of your patients, they will take good care of you," was a rule to live by. Of course, that was when the patients were our patients. An increasingly large number of patients I see are not my patients. They belong to HMOs, insurance companies and hospitals who will graciously consent to let me see their patients if the price is right. We have been whittled down to the point where, in some states, if you can get 90 percent of Medicare, you are lucky. Their plan is simple. Divide and conquer. It's working.

We can do one of two things as an organization—we can be proactive and use this system to our advantage the best that we can and work to change the system, or we can continue our sanctimonious attitude and bury our heads in the sand. However, when your head is buried in the sand, there is a portion of your anatomy that is vulnerable and that is where we have been taking hits for years. Do I think it is necessary to have an organization

for collective bargaining? Yes, definitely. Do I see us striking and letting people die in the streets? No, not the way things are now. If we can get into a position to negotiate what is best for patient care at this time, striking for money will not be necessary. By and large, what's good for patients is good for doctors.

How much strength will it have? I haven't the slightest idea but for whatever reason, our medical societies don't represent us. We need to train our own kind to be our leaders, to be our negotiators, and administrators. This means we need young, energetic physicians who are interested and trained as MBAs, lawyers and negotiators. It also means we need to pay them a comparable wage. Gone are the days when physicians approaching retirement or with health problems can drift into administration. Yes, I have a divergent opinion from Dr. Pontious and feel one of us is wrong. I hope it is me.

Lee E. Schoeffler, MD  
Tulsa

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**J. Michael Pontious, MD, Editor-in-Chief**

601 West I-44 Service Road

Oklahoma City, OK 73118

**e-mail: michael-pontious@ouhsc.edu**

**Please provide the following information in your response to Dr. Pontious...**

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Previous editorial/reviewer experience

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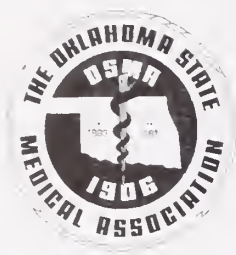
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#### Deaconess Hospital-Cyndi Nelson-405-604-4979

|            |  |         |        |
|------------|--|---------|--------|
| October 20 | Catheter Ablation in<br>Cardiac Arrhythmia | 6:30 pm | 1 hour |
|------------|--|---------|--------|

#### Irwin Brown Office of Continuing Medical Education-Letricia Harris-405-271-2350

|            |   |  |         |
|------------|---|--|---------|
| October 8  | Stroke Prevention/Treatment Series (#0005)  |  | 4 hours |
| October 8  | New Horizons in Epilepsy-1999   |  | 4 hours |
| October 21 | Ft. Sill Series: Otitis Media, Signs of Serious<br>Ear Disease, and Management of Vertigo |  | 2 hours |
| October 30 | Stroke Prevention/Treatment Series (#0006)  |  | 4 hours |

#### Integrus Baptist Medical Center-Donna Schoenfelder-405-949-3284

|            |  |         |        |
|------------|--|---------|--------|
| October 1  | Tumor Board  | 7:00 am | 1 hour |
| October 8  | Tumor Board  | 7:00 am | 1 hour |
| October 11 | Medicine Dept. "Y2K"   | 7:00 am | 1 hour |
| October 15 | "The Role of Tamoxifen in the<br>Treatment of Breast Cancer" | 7:00 am | 1 hour |

|            |   |         |        |
|------------|---|---------|--------|
| October 15 | "Nitrous Oxide in the Ob/Gyn Ofc."              | 7:00 am | 1 hour |
| October 19 | Family Practice- "PET Scanning<br>and Oncology" | 7:00 am | 1 hour |

|            |             |         |        |
|------------|-------------|---------|--------|
| October 22 | Tumor Board | 7:00 am | 1 hour |
| October 29 | Tumor Board | 7:00 am | 1 hour |

#### Jane Phillips Medical Center-Ronda Riden-918-331-1467

|            |  |            |         |
|------------|--|------------|---------|
| October 14 | Cy Young Cancer Symposium-<br>"Current Concepts in Detection and<br>Treatment of Urinary, Bladder, and<br>Prosthetic Malignancy" at the<br>Bartlesville Community Center | 11:15-3 pm | 3 hours |
|------------|--|------------|---------|

#### Mercy Health Center-Debbie Stanilla-405-752-3806

|                 |  |          |        |
|-----------------|--|----------|--------|
| October 7       | "Radiology Update-New Procedures<br>and When To Order Them"  | 12:15 pm | 1 hour |
| October 14      | "Recovering From Traumatic Stress"                           | 12:15 pm | 1 hour |
| October 19      | "NeuroScience Institute Lecture Series"                      | 7:00 am  | 1 hour |
| October 21      | "Brain Receptor Pharmacology in<br>Clinical Medicine"        | 12:15 pm | 1 hour |
| October 28      | "The Hidden Diagnosis: Anxiety<br>Disorders in Primary Care" | 12:15 pm | 1 hour |
| Oct. 6,13,20,27 | Tumor Board  | 7:00 am  | 1 hour |

#### Orthopaedic & Reconstructive Research Foundation-Tara Vaughan-405-616-2676

|           |  |         |        |
|-----------|--|---------|--------|
| October 1 | Diabetes: New Ways to Detect<br>and Manage | 7:30 am | 1 hour |
|-----------|--|---------|--------|

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|------------|---|----------|---------|
| October 4  | "Anxiety Disorders"                       |          |         |
| October 8  | Primary Care Symposium                    | 1-5 pm   | 4 hours |
| October 11 | Oncology Grand Rounds                     |          |         |
| October 13 | Dept. of Women & Children Health          | Noon     | 1 hour  |
| October 18 | "Breast Cancer Screening"                 |          |         |
| October 21 | Research and Trials of<br>New Medications | 11:45 am | 1 hour  |

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator, at 405-843-9571.*

## Health Promotion and the OSMA Alliance

This year's state health promotion project is an anti-smoking campaign. The project is based on the "Women and Girls, Tobacco and Lung Cancer" program. The kit was developed by a task force of the American College of Chest Physicians and is designed for giving customized presentations to a wide variety of audiences. Participants are provided information in the form of slides and resource materials. The kit is complete in itself, but presenters can incorporate slides and handouts from their own libraries.

Tobacco use continues to impact the health of Americans. This program focuses on the use of tobacco by women and girls and seeks to educate and make a positive difference in their health. We are fortunate to have this program available to the county medical alliances for their presentations. President Cheryl Baker and President-Elect Mary Ann Couch will be introducing the kit to the county alliances on their visits across the state. Some of the counties have already used this kit in their communities.

Our focus on anti-smoking was further enhanced by the Extinguisher's recent visit to our state, September 23 through 29. The anti-smoking superhero, co-sponsored by the AMA and OSMA, visited children in schools and community groups across the state with his powerful anti-smoking message. He targeted children in the second through fourth grades. We are delighted to have had this special visitor to our state.

On Wednesday, October 13, county medical alliances throughout the country will observe SAVE (Stop America's Violence Everywhere) Today. This is a day when alliances can promote programs or events in their local communities aimed at reducing violence. This year the focus will be on violence in our schools. The media messages of school violence are alarming and tug at our hearts. Often we are frustrated because, though concerned, we don't know what part we can play in changing the course of this violent behavior.

The AMA Alliance has developed materials that enable medical alliances to implement programs addressing this issue. The hope is for children to learn conflict resolution, enhance self-esteem, and learn that violence is not the answer. Medical alliances throughout our state will be observing this special day in their communities.

The AMA Alliance, in support of the "America's Promise" organization led by General Colin Powell, has agreed to provide one million children in kindergarten through third grade with an activity designed to help them cope with anger and conflict and enhance their self-esteem by the year 2000. To date, more than 600,000 children are beneficiaries of the AMA Alliance efforts. Medical alliances across the country will unite to help make this goal a reality through the SAVE effort.



*Debbie Glasgow  
Health Promotions Chair  
OSMA Alliance*

---

"The media messages of school violence are alarming and tug at our hearts. Often we are frustrated because, though concerned, we don't know what part we can play in changing the course of this violent behavior."

---

# THE LAST WORD

## **OSMA Presents Communication Seminar**

Recognizing the positive and effective role communication plays in a medical practice, the OSMA is presenting a seminar entitled "Communicating: Physicians, Employees, and Public Relations." The seminar is open to physicians, office personnel and spouses. Training expert Bobbi Dobbs, owner of Positive Performance Group, will present the seminar, which is designed to inform and motivate physicians and their office personnel to communicate better and increase the levels of collaboration and mutual support at work. Topics include:

- dimensions in communication styles
- differences in communication styles
- building on the differences
- handling tension in relationships through versatility techniques
- applying it at home, as well as work.

The seminar will take place in Tulsa on October 12, 1:30-5 p.m., at the OUHSC Auditorium, 2808 S. Sheridan. In Oklahoma City, the seminar will be on October 14, 1:30-5 p.m., at the Central Oklahoma Homebuilders Association, 625 W. I-44 Service Road. Cost is \$65 for members, \$85 for non-members. For registration information, contact Michele Smith at the OSMA, 800/522-9452.

## **Breast Cancer Literature Available**

Women have a one in eight chance of developing breast cancer during their lifetime, according to American Cancer Society 1997 surveillance research. In an effort to inform women of the life-saving value of early detection, the Society's Heartland Division is making breast cancer materials available to Oklahoma physicians for display in their practice settings.

Breast cancer is the second leading cause of cancer deaths in women. Out of 175,000 women diagnosed with breast cancer in 1999, an estimated 43,700 will die from it. The free materials state the Society's guidelines for personal breast health and discuss the importance of early detection.

As the largest source of private, not-for-profit cancer research funds in the United States (second only to the federal government), the Society's breast cancer research has:

- proven the safety and effectiveness of mammograms to detect breast cancer
- proven that lumpectomy plus radiation is as effective as mastectomy in breast cancer surgery
- shown the proficiency of the estrogen antagonist, tamoxifen, in preventing breast cancer recurrence

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- proven that a gene, BRCA1, causes inherited breast cancer (and the American Cancer Society now recommends that women with a family history of breast cancer start cancer screenings 10 years before the age of onset in the affected family member)
- proven that Raloxifen, an estrogen antagonist, reduces the risk of breast cancer by 66% in normal-risk, post-menopausal women
- proven that Herceptin enhances the effects of chemotherapy by slowing the growth of an aggressive type of breast cancer that involves too many copies of the HER2/neu gene.

Currently, researchers are evaluating women newly diagnosed with breast cancer to determine how often magnetic resonance imaging (MRIs) will detect additional cancers.

Breast cancer materials for distribution to patients are available by calling Dustin Yowell in Oklahoma City, 405/843-9888 or 800/733-9888.

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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

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## On Thanks...

It is that time of year. The weather is turning a bit crisp. The leaves are falling and blowing and there are signs that autumn is here.

Isn't it time to offer thanks?

I know, the cynic in you cannot accept another of these holidays. It is not politically correct to celebrate this season in ways other than feasting on the opulence of our lives. And besides, most physicians can't find all that much for which to be thankful.

Is this a holiday that misses the mark for physicians?

When was the last time that you overheard a conversation in the Doctor's lounge in which the physician participants were discussing the things about medicine for which they were thankful? It is rare, it is uncomfortable and it is anxiety provoking to speak of this medical taboo. Try to express your "thankfulness" and you are sure to get an unusual stare or the "rolling of the eyes."

I want to pause this season and give thanks for the patients who sustain me as a clinician. From the three-year-old who tells his mother that he needs a new doctor's kit—so he can go home and play Dr. Pontious—to the 98-year-old who wants to bring me some of his homemade fruitcake. They entrust me to help them seek out appropriate health and illness care. I am thankful for the trust. I am thankful for what they have taught me over the years.

I am thankful for the students and residents who entrust me to assist them in their medical pilgrimage. There have been so many that have walked through the doors, touched my life and then vanished into the darkness of their path, moving on to bigger and better things. They take a bit of me with them and for this I am thankful for an opportunity to influence. Teaching is such an awesome responsibility, and its rewards are huge.

Then there are the wonderful people with whom I labor. They are able to read my mixed signals, deal with my demanding patients, protect me from the head-hunters and yet still have a willingness to assist and serve the patient community that seeks health care through my office. They have a yeoman's task when it comes to putting up with my mood swings and temper-tantrums. I am thankful that such loving people surround me.

I am thankful for the community in which I live. They have supported my family and provided me with an environment in which to seek out professional opportunity. They have assembled a wonderful set of physicians who enhance the quality of care that is provided in our cor-

ner of Oklahoma. I am honored by their commitment to excellent clinical care for my patients and my family.

I am thankful for a set of teachers and mentors who took the time and put out the effort to stimulate me to seek, dissect, and think. These mentors have shown me the way, have modeled how I could learn for a lifetime. They have shown me the joy and mystery of probing the unknown and calmed my fears in the process. I owe these teachers a debt that I could never repay. In reality, that may be one of the reasons I strive to be a better teacher...it is my way of paying back this debt that I owe. I see a bit of my teachers in each student that crosses my path.

Although some might find it odd, I am thankful for the institutions in which I work. Sure I become frustrated with their occasional wandering from the noble goal of quality patient care, but for the greatest part these institutions are made up of caring folks who are trying to provide good care for my patients. We live in a time where these relationships are often hard to cultivate. But I am thankful nonetheless.

Then there is my wife and family that wait dinner for me, that put up with my penchant for writing and studying. That humor me when I must miss an important family engagement because of some meeting or a child that decides to be born. They have always forgiven me my trespasses and my absences. They seem to understand that I have to live up to an oath I took so many years ago. I often sense that they took the oath with me and stand there beside me. It is not easy being the children of two physicians. I am thankful for a physician-wife who shares the burdens and joys of this "calling." I am thankful that they take it in stride.

And then I am thankful that I am part of a profession that still values the "calling" of service. Even when the hours are long and the rewards are distant, physicians seek to alleviate pain and suffering, to mend what is dysfunctional and to calm anxiety and fear.

What an awesome gift I have been given! In spite of all of its short-comings and frustrations, I cannot imagine a life outside of medicine.

I am thankful that I have been given the opportunity to serve as a physician.



J. Michael Pontious, MD  
Editor-in-Chief

**"Sometimes our light goes out but is blown into flame by another human being. Each of us owes deepest thanks to those who have rekindled this light."**

**Albert Schweitzer**

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# PRESIDENT'S PAGE

## The Importance of Membership

The most important part of organized medicine is its membership. At the county, state, and national levels, organized medicine cannot survive and carry out its functions without an interested and involved membership. Without a supportive membership, organized medicine would have no reason to exist.



OSMA's goal #2 says that we will endeavor to increase physician members and to increase physician participation. We, organized medicine, must continually ask the physicians of Oklahoma what we can do to make our association relevant—to meet their needs—to be a society that is cost effective for them. We must continually ask, "What can we do for you?" and at the same time let doctors know what they can and need to do for their association. We must all work together, with the same goals.

We are contacting the non-member physicians to see what we can do to make membership more attractive. We are visiting county medical societies to let physicians know what we are doing and to get their input. We are improving communication through better newsletters, a better *Journal*, and an improved website and

e-mail services. We are inviting all physicians to be a part of our councils and committees. We are making plans to be more involved in CME programming and we are making plans to make the annual meeting more attractive to all our members.

We must continue our efforts to remain a unified state. If we are to be proactive in the areas that our members have asked us to represent them in—legislative, managed care, CME, etc.—we need the 85% involvement of Oklahoma doctors that we have now, not the 45% seen in many other states. We will continue to work with the AMA to make unification even more beneficial so that we can encourage other states to follow our lead.

I cannot emphasize strongly enough how much we need our members and how much we need for all the physicians of our state to be members of our association. In return, we will continue to strive to make our county, state, and national associations responsible to the needs of all physicians.

Only with this kind of symbiotic relationship can we continue to have the strength to control the future of our profession and the welfare of our patients.

A handwritten signature in black ink that reads "Boyd O. Whitlock MD." The signature is written in a cursive, flowing style.

Boyd O. Whitlock, MD  
OSMA President

---

"At the county, state, and national levels, organized medicine cannot survive and carry out its functions without an interested and involved membership."

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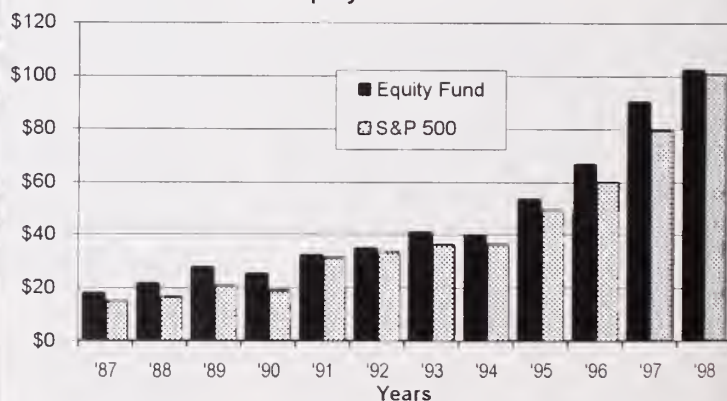
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## Papillary Adenocarcinoma of Unknown Primary in a Young Woman: A Clinicopathologic Correlation Conference from the University of Oklahoma College of Medicine

Michael A. Gold, MD; Shawn Tassone, MD; David Huard, MD; Rosemary E. Zuna, MD

### Case Presentation

#### Shawn Tassone, MD

A 44-year-old white female, gravida 4, para 3013 presented to her primary care provider with urinary symptoms of pressure and frequency. Her history revealed three spontaneous vaginal deliveries, one spontaneous abortion, and a bilateral partial salpingectomy. Her exam was unremarkable. A pelvic ultrasound revealed a  $6.6 \times 3.4 \times 6.2$  solid adnexal mass with a  $3.8 \times 1.5$  cm cystic tubular structure adjacent to the adnexa. She underwent exploratory laparotomy, which revealed grossly normal ovaries, but enlarged external iliac lymph nodes, obturator lymph nodes, and a plaque on the bladder serosa. Biopsies were done.

She was then referred to the Gynecologic Oncology Department at the University of Oklahoma Health Sciences Center for further evaluation. Physical examination of the external genitalia and cervix showed no gross lesions. Her uterus was non-tender, slightly enlarged and anteverted. The adnexa was not palpable. Rectal exam showed no masses; stool was guaiac negative. Her breast exam showed no palpable masses or discharge. Lab values showed a WBC of 9,900 cells/ml with hematocrit and hemoglobin within normal limits. Her platelets were 370,000/ml. The electrolyte panel and liver function tests were within normal limits. Her CA-125 was elevated at 752 ng/ml (normal  $< 35$  ng/ml) and her CEA was increased at 66 (normal  $< 5$  ng/ml). She underwent a Type II modified radical hysterectomy with a debulking procedure. An eight-week size uterus was found with visible tumor noted on the uterus at the bilateral cornua. In addition, shortening of the left ureterosacral

ligament and a plaque of tumor on the bladder serosa 5 mm thick and  $4.0 \times 5.0$  cm were noted. Retroperitoneal exam showed bilaterally enlarged pelvic and periaortic lymph nodes extending up to the renal vessels, the largest node measuring  $5.0 \times 4.5$  cm. She had no ascites and her cervix and ovaries appeared normal.

Postoperatively she underwent six cycles of chemotherapy with Carboplatin AUC 7.5 and paclitaxel. CA-125 fell from 237 ng/ml following her surgery to 82.7 ng/ml after her chemotherapy. A CT scan at that time was unremarkable. Her CA-125 subsequently rose again to 125 ng/ml and doxorubicin 60 mg/m<sup>2</sup> times three cycles was initiated. The doxorubicin was discontinued because of a decrease in her left ventricular ejection fraction from 70–60% and a rising CA-125. A repeat CT scan was unremarkable. Because of increasing edema of her lower extremities and a CA-125 which rose to 258 ng/ml, topotecan was started at the dose of 1.5 mg/m<sup>2</sup>/d  $\times 5$  days. She had a rapid progression of her CA-125 to 479 ng/ml during three cycles of chemotherapy.

Approximately one year after surgery, she was admitted for complaints of a cough, shortness of breath, fever of 102° F, pleuritic chest pain, and 2+ left lower leg edema. Decreased basilar breath sounds bilaterally and crackles throughout were heard on exam. Oxygen saturation was 95% on a 50% face mask. Chest x-ray was consistent with post-obstructive pneumonia and ceftazidime and vancomycin were administered. Blood cultures subsequently showed *staphylococcus aureus*. Her respiratory status initially improved, but then rapidly worsened. In addition, she had worsening left lower

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**Fig 1. Pre-operative pelvic ultrasound. There was a heterogeneous, solid, 6.2 x 3.4 x 6.6 cm mass in the region of the left adnexa.**

extremity edema. Evaluation for possible venous thromboembolism showed negative lower extremity venous Doppler exams and a low probability V/Q scan. Pulmonary arteriogram was ultimately performed and demonstrated no significant thrombi, but showed a mean pulmonary arterial pressure of 61. The patient was placed on noninvasive positive pressure ventilation but she continued to decline and expired one week after admission.

### **Radiology**

#### **David Huard, MD**

At the time of initial presentation, a pelvic ultrasound was performed using both transabdominal and intravaginal transducers. The uterus was normal in size and echogenicity, other than a 1.7 cm leiomyoma of the anterior wall. The double wall endometrial thickness was 4 mm. The right adnexa was normal. There was a heterogeneous, solid, 6.2 x 3.4 x 6.6 cm left adnexal mass (Fig 1). There was vascular flow centrally within this mass. This mass was separate from the uterus, though the image provided did not establish whether it was distinct from the ovary.

A subsequent PA and lateral chest radiograph demonstrated no evidence of disease. A screening mammogram demonstrated the breasts to be predominately fatty without abnormal calcification or mass. Sonography of the thyroid demonstrated normal size, contour, and echogenicity. Multiple postoperative CT scans of the abdomen and pelvis were remarkable only for postoperative changes.

On presentation with her terminal illness, CT scan of the chest, using a pulmonary embolus protocol, revealed a consolidation in the posterior segment of the right upper lobe. As well, there

were multiple small pleural-based nodules in the bilateral posterior basilar segments consistent with metastatic disease. A pulmonary angiogram demonstrated no evidence of macrovascular embolus. There was prominence of the central pulmonary vasculature with an elevated pulmonary artery peak systolic pressure of 82 mmHg.

### **Discussion**

#### **Michael A. Gold, MD**

The pathologic diagnosis at initial surgery was consistent with an adenocarcinoma of unknown primary site, a malignancy without an obvious primary being identified either at the time of surgery or pathologically.

Adenocarcinoma of unknown primary site (ACUPS) is the eighth most common form of malignancy in the United States and is responsible for about 5–10% of all cancers, affecting approximately 50,000 patients a year.<sup>1,2</sup> In this heterogeneous group, 40% can be categorized within a defined subset. These tumors present with signs and symptoms related to the metastatic site of disease and with constitutional symptoms such as malaise, fatigue, and weight loss. There are two distinct entities. The first is a well-differentiated or moderately-differentiated adenocarcinoma; 80% of all ACUPS are well-differentiated. This patient's original outside slides were read as moderately-differentiated, so consideration of this classification of malignancy should be made. The second group is of poorly-differentiated carcinomas of unknown primary site. This includes the anaplastic and the undifferentiated carcinomas and makes up the remaining 20%.

The well-differentiated tumors most commonly affect the elderly and involve bone, liver, and lung. The primary sites include lung and gastrointestinal tract (particularly colon, gastric, and pancreatic cancers). Approximately 20% of these will have the primary site identified during the clinical course and another 75% will identify a primary site at autopsy. In addition to complete history and physical examination, work up should include chest x-ray, CT scan of the chest, abdomen and pelvis, mammogram, and thyroid scan. Median survival in this group of patients is only four months. Treatment has traditionally been with a cisplatin containing chemotherapy or with 5-fluorouracil, doxorubicin, and mitomycin. Response rates are poor, only about 30%. Current evaluation with carboplatin, etoposide, and paclitaxel is a little more encouraging with complete response rates around 10%, partial response 35% and a median survival of 13.4 months.

Some groups of patients tend to do better than others. These are patients with an identifiable primary. Women with adenocarcinoma involving the axillary lymph nodes often have an occult breast cancer that can be identified. Estrogen and progesterone receptors noted on pathology can help support this diagnosis. Evaluation includes a mammogram. Mastectomies performed bilaterally will reveal an unsuspected occult primary in 40–60% of this group of patients. Treatment is according to standard guidelines for breast cancer patients.

The second group of women with well-differentiated ACUPS who have a better prognosis are those who have a diagnosis of primary peritoneal carcinoma. Women whose tumor is found predominantly on the peritoneum were previously diagnosed as having unknown primaries. They are now recognized as a variant of ovarian cancer. Evaluation includes a CA-125 and their treatment involves an aggressive cytoreductive surgery followed by chemotherapy with paclitaxel and platinum. They have a good prognosis compared to other well-differentiated ACUPS.

The present patient's pathology from specimens obtained at University Hospital was interpreted as poorly-differentiated papillary serous adenocarcinoma. She therefore probably falls into the second group of patients with ACUPS, the poorly-differentiated group. The most common age at diagnosis varies, but frequently is as young as this patient. Involved sites also vary but generally include the mediastinum, retroperitoneum, and peripheral lymph nodes. Her retroperitoneal involvement is consistent with this pattern. This diagnosis of ACUPS in these cases often reflect inadequacy of biopsies. These patients present with an abnormal finding on physical examination or on radiographic study. They have a fine needle aspiration which shows adenocarcinoma and the work-up is truncated without identification of a definite primary site.

With further surgical exploration, a diagnosis can often be made. The use of electron microscopy and immunoperoxidase stains can help to identify lymphomas, melanomas, sarcomas, mesotheliomas, and also neuroendocrine tumors. Work-up includes a complete history, physical examination, and chest x-ray. In addition, CTs of the chest, abdomen and pelvis may also be helpful. Tumor markers for human chorionic gonadotropin (HCG) and alpha-fetoprotein (AFP) should also be performed to identify germ cell tumors in this patient population, including extra gonadal tumors.

Survival is somewhat better than for most of the well-differentiated group. Therapy is usually

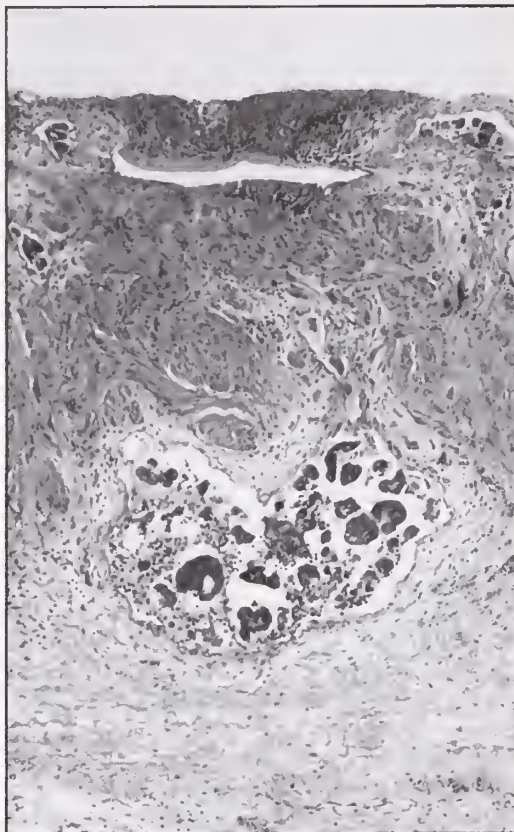
with platinum based regimens and often times includes etoposide or bleomycin. In addition, current studies are evaluating the use of paclitaxel in this group of patients. There is approximately a 25% complete response rate, another 35% partial response rate, and 12% of patients are without evidence of disease greater than 6½ years out from their diagnosis. Overall median survival for this group is approximately 20 months.

Some characteristics associated with a more favorable prognosis are tumor characteristics typical of extragonadal germ cells tumors; predominant location in the mediastinum, the retroperitoneum, or the peripheral lymph nodes (as this patient had); younger age; a lack of tobacco history; and female gender. Finally, with electron microscopy, neuroendocrine tumors can be identified in 10–15% of these patients.

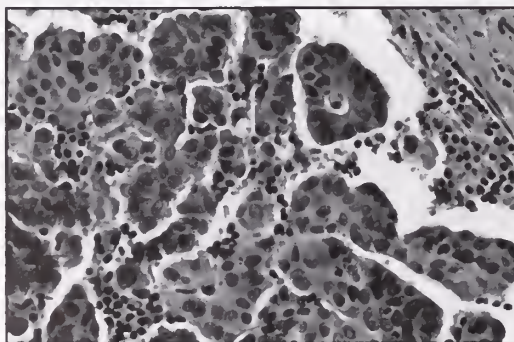
The final pathologic diagnosis from University Hospital was that of a poorly-differentiated papillary serous adenocarcinoma of unknown primary site. Tumor involved the myometrium, endometrial stroma, endocervix, parametria, vagina, paratubal vasculature, retroperitoneal lymph nodes, and peritoneum. Of note is that the ectocervix was not involved. The endometrium was also not involved on final pathology nor were the ovaries, which were grossly normal.

Although poorly-differentiated, the tumor was considered to be papillary serous adenocarcinoma. This is consistent with a Mullerian tumor, and in this patient, may represent a "field effect" in Mullerian carcinogenesis. Therapy was therefore chosen with agents known to be effective in Mullerian tumors; platinum and paclitaxel. She had an initial response with these drugs, but did not show a complete response as monitored by CA-125. On her final admission, the patient presented to the hospital with respiratory embarrassment, complaining of a dry non-productive cough of approximately one-month duration, shortness of breath and pleuritic chest pain. Her oxygen saturation decreased. In addition she had a fever of 102° F, and lower extremity edema. This gives us a differential diagnosis including pneumonia, pulmonary embolus, and lymphangitic spread of tumor. Her chest x-ray upon admission was consistent with pneumonia and cultures ultimately grew out *Staph aureus*. She was treated with antibiotics, had an initial response, then rapidly declined. I don't think pneumonia can be ruled out, however, until we find out the results of her autopsy.

Pulmonary embolus would also explain her acute decline. A V/Q scan indicated a low proba-



**Fig 2.** Papillary adenocarcinoma is present within the sinusoids of a pelvic lymph node massively replaced by tumor. (Hemataxylin and easin, arig. mag 400x).



**Fig 3.** Papillary adenocarcinoma is present in dilated lymphatic spaces of the uterine myometrium in the hysterectomy specimen. (Hemataxylin and easin, arig mag 200x).

bility of embolism, which of course does not entirely exclude it. Venous Doppler studies of the lower extremities were also negative. A pulmonary arteriogram performed immediately prior to her demise, although negative for significant thrombus, demonstrated pulmonary hypertension.

These results lead me to a diagnosis of lymphangitic spread of tumor, which, of course, requires a tissue diagnosis. Echocardiogram to evaluate her heart valves revealed pulmonary pressures around 50 mmHg. The pulmonary arteriogram performed approximately 10 days later had a pulmonary arterial pressure above 60 mmHg, which was a significant change. Although this change could be consistent with pulmonary embolism, no direct evidence was seen on the arteriogram. This data further supports lymphangitic spread as the ultimate cause of her demise.

**Question: Did the patient have a formal GI evaluation?**

**Dr. Michael Gold:** No, she did not have a formal radiographic evaluation of her GI tract, nor did she have a colonoscopy. In general, these would have been very important. In this case, however, with such a strong suggestion of a Mullerian origin, these procedures were not performed. Further, a GI tumor this widely metastatic would have had an extremely poor prognosis and would be essentially untreatable. This patient was treated as if she had a primary site more likely to respond to therapy and did not undergo those examinations. Ultimately, we have to wait for the autopsy to tell us if there was a gastrointestinal tumor.

**Question: Was a massive myocardial infarction ruled out?**

**Dr. Michael Gold:** An echocardiogram performed on transfer to the intensive care unit showed normal wall motion. That is the only information I have.

**Pathology**  
**Rosemary Zuna, MD**

Despite the pelvic mass indicated on the outside ultrasound, no intraperitoneal tumor mass was identified either at the outside laparotomy or at the hysterectomy performed at University Hospital. There was, however, a plaque-like tumor involving the uterine and bladder serosa, and she had enlarged, bulky lymph nodes measuring up to 5 cm. It is conceivable that either the plaque-like tumor or these bulky nodes account for the mass detected on ultrasound. In total, 48/51 lymph nodes at the time of hysterectomy contained papillary adenocarcinoma (Fig 2).

Tissues from an intra-operative dilatation and curettage that were sent for frozen section showed only small fragments of papillary adenocarcinoma in the endocervical and endome-

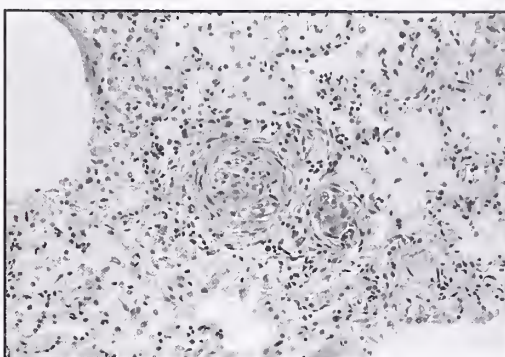
trial curettings. However, there was no grossly detectable tumor mass identified in the hysterectomy specimen received in the Pathology Laboratory. Microscopically, extensive papillary adenocarcinoma was found involving the myometrial (Fig 3), cervical, peritubal and parametrial lymphatic spaces. Significantly, the ovaries were normal in size and showed no evidence of malignancy.

Immunoperoxidase stains showed positive staining for cytokeratin and negative vimentin, leukocyte common antigen (LCA) and HMB45, a melanoma marker, confirming the impression that this lesion was a carcinoma, not lymphoma or melanoma. Stain for estrogen (ER) and progesterone (PR) receptors were both negative; however, these tests are significant only when they are positive. Thyroglobulin was also negative, which argues against, but does not totally exclude occult papillary thyroid carcinoma as the primary lesion.

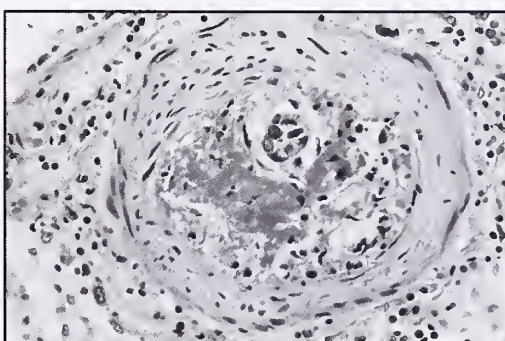
Overall, the morphologic pattern of this lesion was very suggestive of and consistent with papillary serous carcinoma of the female genital tract. While we are aware of the fact that papillary serous carcinoma is the most common primary malignant tumor of the ovary, this tumor type can actually originate in the peritoneal cavity or any female genital tract site including the endometrium<sup>3,4</sup> and endocervix.<sup>5</sup>

At autopsy, no tumor mass was present in any of the organs including the thyroid. This patient's autopsy was remarkable for the lack of gross tumor. There was no evidence of pulmonary embolism or large vessel pulmonary thrombosis. Grossly, both lungs were remarkable for fine, gray-white vessels focally arranged in a lace-like array on the pleural surfaces. The lungs were heavy and showed patchy consolidation throughout. Microscopically, there was diffuse lymphangitic carcinomatosis that involved most organs but strikingly involved the lungs and pleural surfaces. The small vessels in the lungs were frequently occluded by tumor cells, fibrin thrombi, and intimal fibrosis (Fig 4, Fig 5). While it was a clinical problem antemortem, pneumonia was not a prominent microscopic feature of the lungs at the time of autopsy. There was a mild patchy inflammation and a minor component of chronic interstitial fibrosis.

Examination of the heart revealed that the right ventricle was enlarged, thickened, and dilated and the pattern was consistent with cor pulmonale secondary to pulmonary intravascular carcinomatosis, thrombosis, and fibrosis involving small pulmonary arteries and arterioles. In other words, the intravascular tumor



**Fig 4.** A section of lung at autopsy contains two diseased vessels. The larger vessel has intraluminal fibrosis with narrowing of the lumen and a cluster of intraluminal tumor cells. The smaller vessel contains an intraluminal fibrin thrombus. (Hematoxylin and eosin, orig mag 200x).



**Fig 5.** Higher power of small pulmonary artery in the lungs at autopsy shows an intraluminal tumor cell group and a fibrin thrombus, effectively obstructing bloodflow through the vessel. (Hematoxylin and eosin, orig mag 400x).

burden in the lungs decreased blood flow and increased the pressure in the pulmonary arterial system, creating strain, and, eventually failure, on the right side of the heart.

In a report discussing the findings of diffuse carcinomatosis of the lungs,<sup>6</sup> 222 consecutive autopsies showed 19.8% carcinomatous lymphangitis and 8.5% had arterial tumor embolism. These patients had clinically evident respiratory distress, right ventricular hypertrophy and dilation, histologic evidence of pulmonary hypertension and infarcts more often associated with arterial tumor emboli than simple lymphangitic spread. Endarteritis with fibrosis of the pulmonary vessels and secondary pulmonary hypertension were considered to be due to endothelial injury.

In summary, this patient expired with diffuse carcinomatosis involving papillary adenocarcinoma of unknown primary site. Our best sug-

gestion is that this originated as a papillary serous carcinoma of the uterus. She had an astonishing pattern of intra-lymphatic growth in the sense that I would estimate that greater than 90% of the tumor that we saw in this patient was in her lymph nodes, lymphatics, or vascular spaces. Although she had evidence of bacterial pneumonia late in her course that likely contributed to her respiratory deterioration, her terminal illness primarily involved cardiopulmonary decompensation associated with increasing compromise of the pulmonary circulation by intravascular tumor and related effects. The cause of death was assigned to respiratory insufficiency with cor pulmonale due to thrombosis and tumor in the small vessel pulmonary circulation.

**Dr. Robert Mannel:** I would like to second Dr. Zuna's theory that this represents a serous papillary carcinoma of the endometrium. If you look at our series in conjunction with UC Irvine and M.D. Anderson, there are a number of patients who have been reported with superficial endometrial involvement and no invasion. I have had several patients referred to me with D&C specimens showing serous papillary endometrial carcinoma who had no residual tumor at surgery. In these patients, the overall survival rates, even in patients with stage 1A tumor, range around 30–50%. Thus, even those patients who present at early stage and appear to have minimal tumor load have very aggressive disease and poor outcome. These cases do not behave at all like typically indolent endometrial cancer. In putting together your clues, I would be in agreement that this presents a serous papillary carcinoma of the endometrium that was probably scraped off with the D&C, with extensive and aggressive lymphovascular space involvement. We examined a series of almost one hundred of these serous papillary tumors and the primary mode of metastasis was lymphatic in almost 50% with evidence of lymphovascular space involvement in the hysterectomy specimen.

**Question:** Has anyone considered an endocrine approach to this tumor in using MIF (Mullerian inhibiting factor) to try to control its growth?

**Dr. Robert Mannel:** Unfortunately these tumors do not seem to have the same hormonal regulation patterns that most endometrial cancers do. Their ER/PR positivity is extremely low, they don't behave like our standard endometrioid tumors and in particular, from the standpoint of hormonal therapy, they have not responded well. J

#### The Authors

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## Osteolipoma of the Hand: A Case Report

Jeffrey D. Hopkins, DDS, MD; Ghazi M. Rayan, MD

A 61-year-old, healthy woman presented with a six-month history of a mass on the radial volar aspect of her dominant right hand. The patient had a history of trauma to the hand six years previously. Radiographs showed a bony lesion in the index metacarpal shaft and the MRI showed a bony lesion and soft tissue mass suggestive of a parosteal lipoma. Surgical excision of the lesion revealed a lipoma overlying a bony exostosis or osteolipoma of the hand. Post-operatively, the patient's symptoms resolved and she had no recurrence of the tumor.

### Introduction

Lipomas are very common benign tumors that originate from fatty tissue. They are encountered in any area where fat is normally found, and rarely within bone. These locations include the subcutaneous fat, muscle, nerve, synovium, periosteum, and intraosseous. In the extremities, lipomas are more common in women and in the hand; they are encountered more frequently in the sixth decade of life and rarely involve the digits.<sup>1</sup>

Cortical hyperostosis may occur in repose to a slowly enlarging tumor adjacent to bone such as in cases of parosteal lipoma.<sup>2</sup> Bony exostosis is due to disorganized new bone formation that occasionally develops in response to trauma and cortical-periosteal disruption. Subperiosteal hematoma can ossify causing bony exostosis. We present a case where a lipoma developed in association with a sizeable bony exostosis originating from the metacarpal bone of the hand.

### Case Report

A 61-year-old, right handed, healthy woman presented with a mass in her dominant hand of seven months' duration. The patient recalled a

history of acute trauma six years earlier. She sustained a blunt trauma to the dorsum of the right hand, without immediate adverse effects. The swelling was located over the dorsal radial aspect of the index metacarpal. The swelling initially increased in size gradually, then stabilized two months prior to presentation. The patient experienced discomfort when she applied pressure on the palm of the hand and while gripping a golf club. She had no neurologic symptoms.

Examination showed a mildly tender,  $2.5 \times 3$  cm well circumscribed firm mass over the radial palmar aspect of the index metacarpal shaft that was raised 1.5 cm above the surface. The lesion had ill-defined margins, appeared deep to the first dorsal interosseous muscle and fixed to the underlying bone, but not adherent to the overlying structures. Otherwise, she had normal examination of the overlying skin, digital joint range of motion, and sensory and motor function of the hand, including the first dorsal interosseous muscle. X-rays showed a solitary, pedunculated bony mass arising from the index metacarpal mid-diaphysis (Fig. 1).

The mass had a mushroom shape and an irregular, fluffy surface. Surrounding the bony mass was a dark halo of soft tissue lucency. MRI revealed a pedunculated lesion with a signal in the deep portion of the lesion paralleled normal bone and possessed a 1 mm cortical rim corresponding to the peripheral margin of the lesion. There was no cortical or medullary continuity. Immediately surrounding the pedunculated bony lesion was a well defined, homogeneous area of fat signal which immediately abutted the radial aspect of the index metacarpal bone and displaced the adjacent first dorsal interosseous muscle.

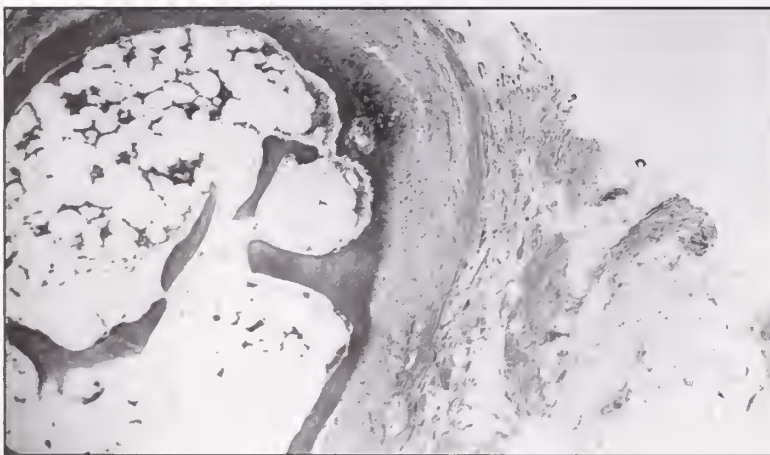
Direct correspondence to: Ghazi M. Rayan, MD, Upper Extremity, Hand and Microsurgery Center, 3366 NW Expressway, Suite 700, Oklahoma City, OK 73112.



**Figure 1.** Hand x-ray shows a salitary, pedunculated bony mass arising from the index metacarpal mid-diaphysis with a mushroom and irregular fluffy surface. Surrounding the bony mass is a dark halo of soft tissue lucency compatible with fat.



**Figure 2.** Intraoperative photograph demonstrating the lipomatous portion of the tumor.



**Figure 3.** Histologic section of the decalcified specimen demonstrating mature bone with an area of fibrocartilage immediately adjacent to cortical bone. The surrounding periosteum is thickened and fibrotic. Mature superficially lie mature fat cells embedded in a fibroadipose stroma.

The clinical and radiographic findings suggested a possible benign parosteal lipoma. Surgical intervention was carried out because of the persistent nature of the mass, discomfort and to rule out malignancy. A 5 cm longitudinal incision was centered over the lesion. The first half of the incision was taken in the midportion, for possible biopsy. The muscle was found to be markedly thinned and the mass was encountered deep to the interosseous muscle. The muscle fibers were separated, and a lipoma was encountered (Fig. 2). Therefore, the skin incision was extended to its full length and a 5 cm  $\times$  3 cm lipomatous tumor was found to be attached to the underlying bony lesion.

The lipoma and the bony mass were removed together with an osteotome, leaving the metacarpal intact. The bony lesion appeared to be benign, suggestive of osteochondroma and was separated from the soft tissue by a fibrofatty layer. Microscopically, both lesions were benign and the decalcified sections showed irregular portions of mature bone rimmed with a focal fibrocartilaginous area embedded in a fibroadipose stroma. The bony lesion, however did not have the hyaline cartilage cap characteristic of an osteochondroma. The marrow was occupied by fatty tissue with scant bone marrow cellularity (Fig. 3).

Post-operatively, the patient's wound healed uneventfully. She had no limitation of digital joint motion. At six weeks follow-up, there was no evidence of recurrence of the lesion.

## Discussion

Lipomas are common benign soft tissue tumors of the upper extremities. In the hand, they account for less than 5 percent of all benign hand tumors.<sup>1</sup> These tumors may be found infrequently adjacent to bone or containing bone. Examples of such lesions are ossifying lipoma, intraosseous lipoma, and parosteal lipoma. An ossifying lipoma is a rare type of fatty tumor containing bone. These lesions consist of a lipomatous component with interspersed cartilage and bone believed to have been formed as the result of a metaplastic process from pre-existing mesenchymal cells.<sup>3</sup>

Plaut et al<sup>3</sup> reported a case of an ossifying lipoma in the base of the middle finger in a 60-year-old female. Histologically, this tumor consisted of bony and cartilaginous masses interspersed within an encapsulated lipoma. There was no connection of the osseous component to the underlying proximal phalanx. Intraosseous lipoma is an extremely rare tumor of bone with approximately 100 cases reported.<sup>4</sup>

Another rare entity is parosteal lipoma that arises from the outer layers of the periosteum or immediately adjacent to the periosteum. Parosteal lipomas have been reported to occur in the hand adjacent to the metacarpals and phalanges.<sup>5,6</sup> A tumor of the humerus has been reported by Jacobs.<sup>7</sup> This was a case of a 58-year-old male with a parosteal lipoma with hyperostosis of the humerus treated by surgical excision. The fatty tumor was benign, overlying an associated osteocartilaginous mass. There was no mention of whether the osteochondromatous element in this tumor featured a cartilaginous cap.

Another case involving a 51-year-old female with a parosteal lipoma and an enlarging osteochondroma of the humerus that was also treated by surgical excision was reported by Demos et al.<sup>8</sup> The osteocartilaginous portion of this tumor consisted of bone and had a distinct, overlying cartilaginous cap.

In a review of the literature, Fleming et al<sup>6</sup> summarized the bony changes seen adjacent to 32 reported parosteal lipomas. These changes included bowing, erosion, sclerosis, osseous projection and subperiosteal new bone formation. Among those changes described, osseous projection was the most common bony change. However, there was no mention of whether these osseous projections were composed of osteochondral tissue. It has been reported that up to 10 percent of parosteal lipomas may be associated with cortical changes that resemble an osteochondroma.

Fleming et al<sup>6</sup> postulated that the osseous portion of the parosteal lipomas they reported was caused by stimulation of bone by the presence of the lipoma itself. Of the previously reported cases, only one mentioned a history of trauma in the form of vaccination in the deltoid muscle.

Our case had a remote history of trauma which may have resulted in subperiosteal hemorrhage and resultant bone formation. Its etiology could be similar to that of a turret exostosis seen in the hand after a traumatic subperiosteal hemorrhage which usually occurs beneath the

extensor mechanism of the proximal or middle phalanges.<sup>9</sup> Such lesions are also encountered in the subungual region and known as Dupuytren's exostosis.<sup>10</sup> Over time, the hematoma undergoes ossification and manifests itself as a hard mass adjacent to the cortex. Alternatively, cortical changes associated with lipomas such as hyperostosis or periostitis has been theorized to be the result of a traction periostitis.<sup>11</sup>

It is likely that the lipoma has developed after the exostosis in response to chronic irritation. The origin of these composite tumors however remains unknown. Our case represents a lipoma in combination with a bony exostosis involving the hand. This case showed histologically an area of fibrocartilage that was not characteristic of a cartilaginous cap, and thus, this lesion could not be described as a true osteochondroma.

#### Acknowledgment

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# PRACTICE MANAGEMENT

## **An Ounce of Prevention is Worth a Pound of Cure: Minimizing Exposure to Fraud and Abuse Liability**

Cori Hook Loomis, JD

### **Introduction**

There was a time when physicians could practice medicine without having to devote too much time or attention to business or legal matters. However, with increased regulation and scrutiny of the medical profession, physicians can no longer simply practice medicine. Physicians must now have a working knowledge of a myriad of billing, reimbursement, contracting, and other legal issues. One area that is becoming increasingly important for physicians to focus on is fraud and abuse.

With increased funding and personnel,<sup>1</sup> the Federal government is aggressively pursuing fraud and abuse enforcement. In FY 1998, the Department of Health and Human Services' Office of Inspector General (OIG) reported 3,021 exclusions of individuals and entities for fraud or abuse of the Federal health care programs (Programs) and/or their beneficiaries, 261 convictions of individuals or entities that engaged in crimes against such Programs, and 927 civil actions.<sup>2</sup>

In addition to government oversight, private individuals are being enlisted by the government to help detect health care fraud and abuse. In March 1998, the Department of Health and Human Services (DHHS) announced "Program Safeguard Contractors" pursuant to which specialized health care fraud contractors will be hired to detect health care fraud. On February 24, 1999, the OIG, the Department of Justice (DOJ) and American Association of Retired Persons (AARP) jointly launched a program that will give financial rewards to Medicare beneficiaries who alert Medicare of acts of fraud and abuse if the information provided leads to a recovery. Pursuant to the theme of "Who Pays? You Pay," the AARP and govern-

ment officials will teach Medicare beneficiaries nationwide to detect billing errors.

In light of the mounting efforts to detect and prosecute health care fraud and abuse, physicians need to take steps to minimize their exposure to such liability. Set forth below are tips for minimizing exposure to fraud and abuse liability.

### **Adopt a Compliance Program**

For the past several years, the government has been "promoting" the voluntary development and implementation of compliance programs by health care providers. The government has developed compliance program guidance for hospitals, home health agencies, durable medical equipment companies, and third-party billing companies. As yet, the government has not developed compliance guidance for physicians. However, on September 8, 1999, the OIG published a notice in the Federal Register (the "Notice") soliciting information and recommendations for developing compliance program guidance for individual physicians and small group practices.

The Notice stated, "While the OIG believes that the great majority of physicians are honest and share our goal of protecting the integrity of Medicare and other Federal health care programs, all health care providers have a duty to reasonably ensure that the claims submitted to Medicare and other Federal health care programs are true and accurate. The development of a comprehensive, effective compliance program by individual physicians and small group practices will go a long way toward achieving this goal."

Physicians should not wait until the OIG develops the compliance guidance specific to physicians and small group practices to begin

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reaping the benefits of a compliance program. There is adequate information available through the guidance issued by the OIG for other types of health care providers to develop an effective compliance program that can be amended at a later date if new information becomes available.

Adopting a compliance program has the following benefits: (1) It will help reduce and prevent misconduct by employees which could lead to civil and criminal liability. (2) In the event of an investigation or audit, it will avoid the imposition of a government or court-imposed compliance program. (3) In the event of conviction of a health care related offense, it likely will result in the reduction of penalties under the United States Sentencing Commission Guidelines.

From a physician's standpoint, another important benefit of implementing a compliance program is that it reduces exposure to frivolous *qui tam* lawsuits<sup>3</sup> and puts the physician in a better position to defend such lawsuits. For example, a billing clerk files a *qui tam* lawsuit against Dr. X alleging that he upcoded office visits. Upon review of some patient records, it is determined that some billing errors were made. Dr. X claims that he entrusted the coding and billing to his office staff, whom he believed to be well trained. Dr. X never expressly instructed his office staff to code correctly and did not have any written policies and procedures regarding coding and billing practices. Under such circumstances, Dr. X's defense is weak.

However, if Dr. X had implemented a compliance program which expressly stated that upcoding and other types of fraudulent billing were not condoned and that any suspected billing errors should be reported and investigated, Dr. X would be in a much better defensive posture. Dr. X's lack of intent to commit fraud could be demonstrated by establishing that the *qui tam* plaintiff had knowledge of suspected billing errors, but did not properly report the incidents so that they could be investigated and corrected by the doctor.

### **Conduct Exit Interviews**

Physicians should conduct exit interviews when employees are terminated or leave voluntarily or have their office administrators conduct such interviews. The interview should include questions intended to elicit information regarding misconduct or billing errors observed or committed by the outgoing employee. Pertinent information may or may not be obtained, depending on the circumstances of the employ-

ee's termination, but the act of conducting, or attempting to conduct, an exit interview, demonstrates a good faith effort to detect any possible wrongdoing.

The interview questions should be included in a form that is used for all employee exit interviews. Former employees who make reports to *qui tam* lawyers or government agencies may not appear to be credible if they did not inform the physician of compliance concerns during the exit interview.

### **Ensure that Billing and Coding Staff Is Adequately Trained**

Often the responsibility for training coding and billing staff is delegated to other staff members, which can lead to mistakes being perpetuated. Physicians should require members of their coding and billing staff to attend coding and billing seminars that are periodically offered in various locations throughout Oklahoma. The cost of such seminars is minimal compared to the liability a physician may face if erroneous claims are submitted.

Also, physicians need to ensure that their staff has access to adequate resources to answer coding or billing questions, such as the applicable coding manuals. Retaining outside consultants to do periodic billing and coding audits also is a good idea as a safeguard and is not cost prohibitive if the audit is based only on a sample of medical records.

### **Do Not Run Afoul of the Federal Anti-Kickback or Self-Referral Statutes**

The recent guilty verdicts against the two Kansas City doctors, Robert and Ronald LaHue, for participating in a conspiracy to receive money in exchange for referrals of nursing home patients to a hospital, which was in violation of the Federal Anti-Kickback Statute<sup>4</sup> (Anti-Kickback Statute), illustrates the need to ensure compliance with the Anti-Kickback Statute and the Federal Self-Referral Statute<sup>5</sup> (otherwise known as "Stark II").

The Anti-Kickback Statute is a criminal statute that prohibits payments as inducement for referrals of Medicare or Medicaid beneficiaries and beneficiaries of other Federal health care payment programs. The Anti-Kickback Statute prohibits both the solicitation or receipt of prohibited compensation, and the offer or payment of prohibited remuneration.

Stark II prohibits a physician from making a referral to an entity for the furnishing of a "des-

ignated health service”<sup>6</sup> for which payment will be made by the Medicare program if the physician, or an immediate family member of the physician, has a “financial relationship” with such entity. Stark II also prohibits an entity from presenting, or causing to be presented, a Medicare/Medicaid claim for a designated health service that has been rendered pursuant to a prohibited referral.

There are “safe harbors” to the Anti-Kickback Statute and exceptions to Stark II which protect financial arrangements meeting specified criteria from liability under such statutes. Each safe harbor and exception has its own unique set of requirements. In order to avoid liability under such statutes, physicians should ensure that all of their financial relationships with entities to which they refer, or from which they receive referrals, comply with the requirements of the Anti-Kickback Statute safe harbors and the Stark II exceptions.

### **Comply with Medicare Reassignment Rules**

In the OIG’s 1999 Work Plan, reviewing physicians’ arrangements with billing service companies and reassignment arrangements were listed as areas that the OIG will target for investigation in 1999. The general rule is that Medicare only will pay the person or entity that actually provided the health care service. However, Section 3060 of the Medicare Carrier’s Manual sets forth numerous exceptions to the general rule. For example, a physician may reassign his/her right to receive Medicare payments to an employer, a facility at which he/she provides services, or a billing agent. Each of these reassignment exceptions has its own set of requirements that must be met.

The exception that has generated the most controversy is the one permitting payments to billing agents. One of the requirements of the billing agent exception is that the agent’s compensation is not dependent on the actual collection of payment.<sup>8</sup>

This requirement generally prohibits a billing agent from being compensated based on a percentage of collections. However, a “loop-hole” in the rule permits billing agents to receive compensation based on a percentage of collections if the Medicare reimbursement checks are first deposited in a bank account over which the physician exercises control before the billing agent is permitted to exercise any control over the funds. This exception generally is referred to as a “lockbox” arrangement.

Despite the fact that a lockbox arrangement complies with the literal language of the statute, the government has become suspicious of such arrangements and is discouraging them. The most conservative position is to avoid percentage of collection billing arrangements.

The number of reassignments a physician has also is raising concern with the Health Care Financing Administration (HCFA). HCFA program memorandum B-98-39 instructs Carriers to review reassignment agreements for physicians who have five or more reassignments and to verify their legitimacy with the physicians. Carriers also are directed to analyze reassignments that have not been used during the past 12 months.

Physicians need to ensure that reassignments of Medicare payments are effectuated pursuant to the requirements set forth in Section 3060 of the Carriers Manual. In addition, when a relationship or arrangement ends, physicians need to take steps to ensure that their provider numbers are not being used incorrectly.

For example, when a physician leaves an employment relationship pursuant to which the employer was billing and receiving reimbursement for services provided by the physician, it would be prudent to get a written representation that the employer will discontinue use of the physician’s provider number and that the Carrier will be notified of the revocation of the reassignment agreement.

### **Do Not Waive Co-Payments and Deductibles**

The routine waiver of Medicare co-payments and deductibles by charge-based providers is unlawful because it results in false claims, violations of the Anti-Kickback Statute, and excessive utilization of items and services paid for by Medicare. OIG Special Fraud Alert: Routine Waiver of Co-payments or Deductibles Under Medicare Part B (May 1991). The government takes the position that a physician who routinely waives Medicare co-payments or deductibles is misstating his/her actual charge.

For example, if a supplier claims that its charge for a piece of equipment is \$100, but routinely waives the co-payment, the actual charge is \$80. Therefore, Medicare should only pay 80 percent of \$80, not 80 percent of 100. The waiver of co-payments and deductibles is becoming an issue with many private insurance companies as well and is prohibited pursuant to many provider service agreements. The waiver of co-payments and deductibles is a target area

of government scrutiny and enforcement. Therefore, physicians should discontinue the practice of accepting "insurance only."

### **Be Careful to Properly Bill Consultations**

The Medicare Carriers, HCFA and the OIG have articulated the following concerns about the reimbursement for physician consultations: (1) Physicians may be misinterpreting the Medicare definition of a consultation when billing the program for services rendered. (2) Some billings for consultations may actually reflect ongoing definitive care instead of an advisory-type consultative service. (3) Some physicians are being reimbursed for certain consultation services that should be included in their global fees for surgery. (4) Some physicians may be misrepresenting the intensity of the service provided when submitting claims. (5) Some routine medical examinations performed prior to surgery may be billed improperly as consultations.

Carriers Manual §15506 provides: "In general, a consultation is distinguished from a visit because it is done at the request of a referring physician (unless it is a patient-generated confirmatory consultation) and the consultant prepares a report of his/her findings which is provided to the referring physician for the referring physician's use in treatment of the patient." If the referring physician transfers the responsibility for treatment of the patient to the receiving physician at the time of the referral in writing or verbally, the receiving physician should not bill for a consultation. If responsibility for the patient has been transferred, the receiving physician should bill "a subsequent hospital care code in the hospital setting or an appropriate established patient code in the office setting."<sup>9</sup>

The referring physician dictates how the receiving physician can bill for the visit by what he/she says. The receiving physician cannot make the decision unilaterally. It is important to document in the patient's medical record the request for consultation from the referring physician and the written report from the receiving physician.

If a physician who performs a pre-operative clearance subsequently assumes responsibility for the management or treatment of a patient post-operatively, the consultation codes should not be used. "In the hospital setting, the physician who has performed a pre-operative consultation and assumes responsibility for the management of a portion or all of the patient's con-

dition(s) during the post-operative period should use the appropriate subsequent hospital care codes (not follow-up consultation codes) to bill for the concurrent care he or she is providing. In the office setting, the appropriate established patient visit code should be used during the post-operative period."<sup>9</sup>

### **Do Not Run Afoul of the "Incident to" Rules**

"Incident to" services are defined as "services or supplies that are furnished as an integral, although incidental, part of the physician's personal professional services in the course of diagnosis or treatment of an injury or illness."<sup>10</sup> To be covered as incident to the services of a physician, services and supplies must be: (1) An integral, although incidental, part of the physician's professional service. (2) Commonly rendered without charge or included in the physician's bill. (3) Of a type that commonly are furnished in physician's offices or clinics. (4) Furnished under the physician's direct personal supervision. (5) Furnished by the physician or by an individual who qualifies as an employee of the physician (whether part-time, full-time or leased).<sup>10</sup>

Physicians often inadvertently run afoul of the "direct supervision" requirement of the "incident to" rule. Direct personal supervision in the office setting does not mean that the physician must be physically present in the same room at the time such services and supplies are provided. However, the "physician must be present in the office suite and immediately available to provide assistance and direction throughout the time the aide is performing services."<sup>10</sup> This prohibits physicians from billing for services rendered at their office when they are in surgery or out of the office for some other reason. Services provided by auxiliary personnel in institutions such as skilled nursing facilities or nursing homes generally cannot be billed as "incident to" a physician's services. The availability of the physician by telephone or the presence of the physician somewhere else in the institution does not constitute direct personal supervision.

### **Use Due Care When Signing Certifications for DME or Home Health Care**

The OIG recently announced that 14 percent of physician orders for durable medical equipment ("DME") are questionable or medically unnecessary which results in approximately \$414 million in Medicare overpayments. In January

1999, the OIG issued a Special Fraud Alert titled "Physician Liability for Certifications in the Provision of Medical Equipment and Supplies and Home Health Services" ("Fraud Alert"). The Fraud Alert announced the targeting of OIG enforcement efforts against physicians ordering home health care without assessing the patient's need for it or authorizing unnecessary durable medical equipment. In the Fraud Alert, the OIG recognizes that the "actual incidence of physicians intentionally submitting false or misleading certifications of medical necessity for durable medical equipment or home health care is relatively infrequent." However, the Fraud Alert continues by stating that "physician laxity in reviewing and completing these certifications contributes to fraudulent and abusive practices by unscrupulous suppliers and home health providers."

According to the Fraud Alert, the OIG will look for physicians who: (1) Prescribe services and items as a courtesy to a patient, service provider, or medical equipment supplier, without first making a determination of medical necessity. (2) Knowingly or recklessly sign false or misleading medical certifications. (3) Accept financial considerations in return for their signature.

In the case of eliminating certifications for medically unnecessary DME, the OIG has provided the following three suggestions: (1) Only the physician who is treating the patient who will use the DME should order the DME. (2) Physicians should submit a new CMN to the durable medical equipment regional carrier when the physician, the medical need, or the actual equipment changes. (3) All orders or prescriptions for DME should include the beneficiary's name and full address; the physician's signature; the date the physician signed the prescription or order; the description of the items needed; the start date of the order (if appropriate); and the patient's diagnosis and a realistic estimate of the total length of time the equipment will be needed.

In the case of eliminating certifications for medically unnecessary home health care, physicians should ensure that: (1) The patient is confined to the home. (2) The individual is in need of intermittent skilled nursing care, speech or physical therapy, or language pathology services, or occupational therapy. (3) A plan of care has been established and is periodically reviewed by the physician. (4) The home health services are furnished while the patient is under the care of a physician.

## Conclusion

The tips set forth above will not ensure that a physician will not be the subject of an investigation or prosecution, but they will help reduce the chances of such events occurring. The statutes and rules relating to health care are too complex, and there are too many variables, to develop an exhaustive list of all of the areas of potential fraud and abuse risk. However, implementing effective policies and procedures addressing billing and coding issues and ensuring that mistakes are not made in areas which the government has targeted, and for which the government has issued clear directives, go a long way toward avoiding costly and damaging audits and investigations. J

## The Author

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1. The 1996 Health Insurance Portability and Accountability Act ("HIPAA") provided \$104 million for the fraud and abuse control program in FY 1997 and mandated a 15% increase in that funding for each year through 2003. HIPAA also provided \$820 million in direct mandatory appropriations over seven years to the OIG and \$330 million to the Department of Justice for additional prosecutors. The FBI also received \$548 million in a separate direct mandatory appropriation.
2. The semiannual report of the OIG for the 6-month period ending September 30, 1998.
3. *Qui tam* lawsuits are authorized by the Federal Civil False Claims Act, 31 U.S.C. §§ 3729-3731, and permit a private individual, or relator, to initiate a false claim lawsuit on behalf of the Federal government. The government has the election of intervening in the lawsuit. A *qui tam* relator may receive a percentage of the government's recovery (25 to 30 percent if the government does not intervene; 15 to 25 percent if the government does intervene). In 1997, there was a record number of *qui tam* actions filed (530), an increase of almost 46% over the year before.
4. 42 U.S.C. § 1320a-7b.
5. 42 U.S.C. § 1395nn.
6. The term "designated health service" includes: (i) clinical laboratory services; (ii) physical therapy services; (iii) occupational therapy services; (iv) radiology, including magnetic resonance imaging, computerized axial tomography scans, and ultrasound services; (v) radiation therapy services and supplies; (vi) durable medical equipment and supplies; (vii) parenteral and enteral nutrients, equipment, and supplies; (viii) prosthetics, orthotics, and prosthetic devices; (ix) home health services and supplies; (x) outpatient prescription drugs; and (xi) inpatient and outpatient hospital services. 42 U.S.C. § 1395nn(h)(6).
7. A "financial relationship" for purposes of Stark II is either: (i) an ownership or investment interest in an entity (which may be through equity, debt, or other means); or (ii) a compensation arrangement with the entity. 42 U.S.C. § 1395nn(a)(2). The statute specifies that financial relationships may be either direct or indirect.
8. Carriers Manual § 3060.10.
9. Carriers Manual § 15506 F.
10. Carriers Manual § 2050.1.

## Getting Your CME from a Distance; or How to Get Those Last Few Hours of Category 1

Roger E. Sheldon, MD, MPH

### The Situation

Oklahoma physicians are increasingly aware that the license they receive this academic year (July 1999 through June 30, 2000) will be the last one before the Oklahoma requirement for Continuing Medical Education (CME) goes into effect. Since the CME requirement reaches back three years, those who have been licensed for those three years will be expected to affirm that they have attended/achieved three years of CME credit in order to qualify for a medical license renewal next year. Since there is some application delay, the time before some physicians get CME shock is now less than a year.

### The Mandate

The Oklahoma State Board of Medical Licensure and Supervision has set the expectation, starting July 1 of 2000, that physicians renewing their license will be required to affirm that they have participated in 150 hours of CME over the past three years. At least 60 of these hours must be in Category 1 of the AMA Physicians' Recognition Award or its equivalent. Prescribed hours of the American Academy of Family Physicians will be accepted along with hours approved by "other certifying organizations recognized by the Board."

These expectations are exactly the same as The Physician's Recognition Award (PRA) of the AMA, which will be accepted by the board as sufficient evidence of compliance.

### The Audit

Some small percentage of all licensees will be audited—asked to produce documentary evidence of the CME. "Failure to maintain such records rebuts the presumption that CME requirements have been completed. Misrepresenting compli-

ance with CME requirements constitutes a fraudulent application."<sup>1</sup>

### The PRA

Award of a three-year PRA may be the best way to document CME compliance. It accepts and totals all categories of credit, whether Category 1 with its certificates of attendance, or Category 2 with the doctor self-certifying participation and learning. Since so many types of activity can be claimed for Category 2 credit, it is easiest if those claims are all rolled into the single PRA credential. Holding a current PRA is the equivalent of exemption from the CME mandate. Application for a PRA is easy:

- complete the PRA Application form (obtained from the American Medical Association),
- enclose the Category 1 certificates,
- claim and tally your Category 2 activities,
- reach the expected 150 hours in three years, of which at least 60 are Category 1,
- attest that you read at least 100 hours per year in the authoritative medical literature (check the box),
- and send it in with \$24 (\$48 for AMA non-members).

Your PRA achievement will be noted among your other credentials on the AMA Physician Select website. One- and two-year PRAs are also available, but with these, the board would require additional independent documentation of any balance of credits to reach the three-year total.

The Irwin H. Brown Office of Continuing Medical Education at the University of Oklahoma College of Medicine even offers a

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service ("Credit Keepers") that will tally your hours, both Category 1 and 2, will remind you of your upcoming license date and will complete your PRA application for you. The service costs \$89 per year. You can get more information at 271-2350 or 1-800-OUCME4U.

### The Exemptions

Physicians who are in a residency or fellowship training program can get a PRA solely for that residency, but are specifically exempted from the Oklahoma mandate. Physicians who have re-certified with their "specialty group whose program for the certification has been found by the Board to be equivalent to the Physician Recognition Award" are exempted for three years. This would include re-certification by any specialty board recognized by the American Board of Medical Specialties. Of course many of these people will also have attended Category 1 CME offerings during the course of their board review. Physicians in emeritus status with the board do not require CME to continue in that status.

### Don't Wait Too Long

Interest and attendance at Category 1 CME activities has increased sharply over the last few months, and will continue to do so. Some courses have sold out or reached capacity. Planning ahead may be required to avoid disappointment or worse. Fortunately, more activities are being offered. The Irwin H. Brown CME Office at OU has increased from about 40 offerings two years ago to more than 100 this past year. Many of these are designed for specialists or sub-specialists.

### Rural and Solo Physicians

Some physicians have found it difficult to leave their practices for out-of-town CME offerings. So how is a doctor supposed to get Category 1 credit, especially physicians living at a distance from the cities?

### Distance-Learning Methods

One answer is distance learning—methods for "attending" and getting credit for CME activities without going to a conventional CME course—without even leaving town! Without even leaving your home! This sort of activity is far more available these days, both by "enduring materials" (books, tapes, videotapes, journal articles—usually with a short test to prove participation), by satellite and distance methods (compressed and full motion videoconferences,

audio conferences and the like) and over the Internet.

Distance methods have the advantage/disadvantage that they occur at a specified time (and place). You may need to go somewhere to take advantage of the interactive possibilities of real-time connection with the speaker—there you can even ask questions and get them answered live. Some offerings are recorded for non-interactive use later. Credit may still be available by taking a quiz over the material.

### Enduring Materials

Numerous print or multimedia offerings are available for Category 1 credit. This includes everything from periodical "newsletters" and printed coursework, through audio and videotapes, to CD-ROMs for computer use. Many of these are proceedings of CME meetings, conventions or scientific sessions. Others are custom-designed CME programs. Category 1 enduring materials must have an expiration date, so look carefully at the brochure before undertaking one for credit. You can find these materials through any journal or specialty society as well as on the web.

### Journal Articles

Journal reading is a confusing part of the CME story—at least as far as the PRA is concerned. There are two distinct varieties of PRA. Both types of PRA expect that the physician read the authoritative medical literature a minimum of 100 hours per year. Applicants must sign an affirmation that they read at least that much. The two varieties of PRA have different rules about reading journals and books for credit. The "PRA with special commendation for self-directed learning" does not allow hour-for-hour credit (Category 2) for reading. The standard PRA allows a learning plan to include such reading and permits hour-for-hour Category 2 credit. This allows Category 2 hours from reading to make up a significant portion of the hours.

Several medical journals now offer some articles for Category 1. Hours can be earned by reading specified articles in the *New England Journal of Medicine*, *JAMA*, *American Family Physician*, and *Postgraduate Medicine* among many others. These hours can be included in the 100 hours of reading that is expected of all PRA applicants. Most journals require the participant to answer a short quiz covering the material in the article. Most charge a small fee for credit, although by "shopping around" you may be able to find credits at no cost.

"The AMA encourages physicians to have a balanced program of continuing medical education that does not rely on a single type of learning. Journal-based activities should not be used as the only source of AMA PRA Category 1 credit in an application for the Physician's Recognition Award."<sup>2</sup>

Other CME periodicals are springing up to meet this need. In pediatrics, for instance, there is a monthly publication called *AAP Grand Rounds* which offers 16 hours annually for reading focussed reviews of journal articles and completing a quiz once a year. And locally, Dr. Venusto San Joaquin offers a pediatric infectious disease newsletter called "The Vector." This is available for credit through the Irwin H. Brown Office of CME and over the Web (see "The Internet" section below).

Most specialty societies have several Category 1 activities, mostly enduring materials of the audio or videotape variety. Study books and programmed learning modules are also often available. Specialists (and to some extent, primary care physicians as well) will find these offerings by contacting the appropriate specialty society or the American Academy of Family Physicians.

### The Internet

The fastest growing source of CME is the Internet—mostly via the World Wide Web. A brief search using search engines like Lycos, Yahoo, or HotBot will yield numerous websites that offer CME, sometimes for Category 1 hours. A number of these sites are listed (and linked) at the OU CME Website. Simply go to the OUHSC homepage at <http://www.ouhsc.edu> and click "Continuing Medical Education" under the "College of Medicine" (menu on the left side of the page.) In addition to offering a few hours of credit itself over the Web (click "Continuing Medical Education on the Web") there are a number of other sites under "Internet Resources for Physicians and Patients" and "Medical Links." Under "Internet Resources for Physicians and Patients," the second site under "Physician Resources" labeled "Distance Learning Courses on CME" (University of Buffalo site) will take you to numerous informative sites. Unfortunately, most are not yet offering Category 1 credit.

Recently, large numbers of sites are coming online with category 1 credit for the earning. About the only way to keep track of websites is using other websites; one which has a recently

updated annotated listing of available online Category 1 sites is <http://www.netcantina.com/-bernardsklar/onlinecmelist.html>. At this site you can link to any of 76 sites offering credit over the Internet. Of these some of the most useful and interesting are:

- <http://www.ama-assn.org/cmeselec/cmeselec.htm> — The AMA CME Select site has meetings, international meetings, and home study activities searchable for a certain date span by location or by specialty.
- <http://www.cmeweb.com>
- <http://www.searchcme.com>
- <http://www.cmegateway.com>
- <http://www.medscape.com>
- <http://www.arcmesa.com>
- <http://www.vlh.com> (virtual lecture hall)
- <http://www.laurus.com>

Some additional sites offering audio or videotapes with credit include:

- <http://www.amscme.com>
- <http://www.cmeinfo.com>
- <http://www.landesslezak.com> (CME unlimited, the Audio Digest people)

As you can see, CME for Category 1 credit is getting easier to find. Local hospitals and university offerings are becoming more plentiful and more diverse. But more important to the isolated or solo practitioner, high quality material of practical use to the practicing physician is now available without leaving home. Now a physician can lay out a focused personal plan for CME and find the materials to carry out that plan.

Each physician should plan for CME that is well thought out and meets personal needs. These non-traditional approaches may help you build a meaningful CME program for your own type of practice, current needs, and schedule. □

### The Author

Dr. Sheldon is professor of pediatrics and medical director of the Children's Hospital of Oklahoma, and assistant dean for continuing medical education at the OU College of Medicine. He serves as chair of the OSMA Council on Education, the group that recognizes Oklahoma hospitals to offer CME locally.

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1. Regulations of the Oklahoma State Board of Medical Licensure and Supervision, 1998
2. American Medical Association: Physician's Recognition Award Information Booklet, August 1999

# American Medical Association Organized Medical Staff Section (AMA-OMSS)

*invites your medical staff to be represented at the*

## 1999 Interim Assembly Meeting, December 2-6, in San Diego

### *Vision Voice Victory*



*If physicians want to be effective agents for change in improving today's health care, they need **a vision, a voice, and a victory.***

*The vision* comes from grassroots physicians...representatives of hospital or other health care organization medical staffs...that come together in a national forum to share ideas, concerns, and interests.

*The voice* is the AMA-OMSS. It resonates within the AMA and is projected to Congress, private and public sector leaders, and the public through the implementation of policy and other advocacy initiatives.

*The victory* is the fruit of your effort to make a difference.

Be part of the process. Send a representative\* from your medical staff to the **1999 Interim AMA-OMSS Assembly Meeting, December 2-6, in San Diego.** *There is no fee to attend.*

OMSS representatives can:

- Submit resolutions prior to the Assembly meeting.
- Testify at Reference Committee hearings and vote in the Assembly.
- Participate in special issue forums.
- Network at state and regional caucuses.
- Attend education programs. (*Topics include: managed care contracts, new CPT codes and software, preventing and managing adverse outcomes, improving physician image through community involvement, protecting your practice from embezzlement, conflict of interest policies, technology and medical staff reengineering, ways to be an effective agent for change, reestablishing collegiality in the medical profession, and federal and state legislative affairs.*)

For more information on how to register, call 800 262-3211 and ask for the Department of Organized Medical Staff Services or e-mail us at [omss@ama-assn.org](mailto:omss@ama-assn.org).

\* Must be an AMA member

## American Medical Association

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## Campbell Installed as President of the American Academy of Otolaryngology

John G. Campbell, MD, clinical professor and vice-chair of the Department of Otolaryngology at the University of Oklahoma School of Medicine, was installed as president of the American Academy of Otolaryngology—Head and Neck Surgery and Foundation at its annual meeting in New Orleans, Sept. 26, 1999.

Dr. Campbell, while serving on the Executive and Finance Committee, was selected by his peers last September as president-elect. As president, he will be the chief executive officer of the Academy for a one-year term.

Dr. Campbell is also in private practice at Associated Ear, Nose, and

Throat, Inc. of Tulsa. He received his medical degree from the University of Oklahoma School of Medicine in 1966.

The American Academy of Otolaryngology—Head and Neck Surgery is a medical organization of more than 11,000 physicians who specialize in the medical and surgical treatment of the ears, nose, and throat, and related structures of the head and neck. Its function is to advance the science and art of medicine related to otolaryngology and to represent the specialty in governmental and socioeconomic issues.



*John G. Campbell, MD, of Tulsa, assumed the presidency of the American Academy of Otolaryngology - Head and Neck Surgery at its annual meeting in New Orleans, Sept. 26, 1999.*

## Jordan Recognized by American Red Cross for Tissue Donation Efforts

Fred Jordan, MD, chief medical examiner, has been named Oklahoma's first recipient of the Dream Catcher Award presented by the American Red Cross Tissue Services, Southern Plains Region. The award is given in recognition of individuals who demonstrate exceptional initiative and extraordinary efforts in the development, implementation, or service of a Red Cross Program.

Dr. Jordan and his staff were recognized for their ongoing efforts to encourage tissue donation. In receiving this local award, Dr. Jordan is also being nominated for award consideration at the regional level. Dr. Jordan's nominators cite his, "strength of belief in donation and for his dedication to the process and long years of American Red Cross volunteerism."

## Norwood-Dingell Bill Passes in U.S. House of Representatives

The U.S. House of Representatives passed the Norwood-Dingell patients' rights bill (H.R. 2723) by a vote of 275-151. Following hours of debate and consideration of three substitute amendments, the vote came down to the wire. The bipartisan Norwood-Dingell bill provides the strongest and most meaningful patient protections of those being considered.

In response, American Medical Association President Thomas R. Reardon, MD, said, "In passing the Norwood-Dingell patients' rights bill, the House sent a message to our patients that our Representatives care more about the quality of health care than about insurance company dollars."

Among other protections, the bill will:

- guarantee medical necessity determinations are made by physicians (MDs/DOs);
- guarantee all patients access to a timely and binding independent external appeals process;
- enable patients the right to seek recourse against managed care plans under state law when the plan's negligent medical decisions result in death or injury;
- ensure all enrollees have the opportunity to choose, at their

own expense, a point-of-service option;

- permit direct access to ob/gyn and pediatric care;
- institute a "prudent layperson standard" for emergency care;
- prohibit the inclusion of gag clauses in physician contracts; and
- require disclosure of important and basic information about medical coverage to enrollees.

The Senate patients' rights bill approved in July does not include the right to sue managed care plans, so a compromise will have to be formed between the two houses.

## AMA Held 1999 Political Grass Roots Conference

The American Medical Association recently held its 1999 Political Grass Roots Conference in Washington, D.C. Medical community leaders from around the country had the opportunity to gather and receive the latest information on legislative issues of interest to physicians and patients.

This year's conference focused on three critical points being considered by Congress:

- antitrust relief for physicians included in the "Quality Health Care Coalition Act of 1999," H.R. 1304;
- patients' rights legislation, including the "Bipartisan Consensus Managed Care Improvement Act of 1999," H.R. 2723 by Rep. Norwood

(R-GA) and Rep. Dingell (D-MI) and the "Health Care Quality and Choice Act of 1999," H.R. 2824 by Rep. Coburn (R-OK) and Rep. Shadigg (R-AZ);

- correction of HCFA's sustainable growth rate projection errors that have robbed physicians of three billion dollars and the enactment of all necessary measures to prevent large physician payment cuts in the future.

Participants also received training, attended special sessions, and received political updates from Vice President Al Gore, Rep. Ganske, MD (R-IA), Rep. Norwood, DDS, (R-GA), Sen. Kennedy (D-MA), and Sen. Fitzgerald (R-IL).

Oklahomans attending the conference included Boyd O. Whitlock, MD, OSMA president; Richard Boatsman, MD, chair of the Governmental Activities Council; David M. Selby, MD, vice chair of OSMA's Governmental Activities Council; AMPAC board members; and Kathy Musson, OSMA director of Governmental Activities. These OSMA representatives, along with OSMA Federal Lobbyist John Montgomery, carried the OSMA's message to the Oklahoma Congressional Delegation both days of the conference during Capitol Hill visits.

## E&M Advisory Task Force Formed

The American Medical Association (AMA) Board of Trustees have selected 13 physicians to staff the Ad Hoc Task Force on the Evaluation and Management (E&M) Documentation System.

The task force will advise the Board of Trustees as it continues to work with the Health Care Financing Administration (HCFA) to refine, test, and evaluate the E&M documentation system prior to implementation.

"The Board is committed to pressing HCFA to eliminate obtrusive aspects of the E&M documentation system and to ensuring that any changes are thoroughly pilot tested," according to D. Ted Lewers, MD, chair of the AMA Board of Trustees. "The experienced practicing physicians appointed to the ad hoc task force will provide us with valuable assistance in that vital task as called for by our House of Delegates."

The Board of Trustees chose the task force chair and the additional 12 task force members from nominees submitted by state and medical specialty associations. Consistent with the wishes of the House of Delegates, the task force is composed exclusively of full-time, actively practicing physicians. In addition, appointees who represented a wide range of practice settings, geographic locations, specialty perspectives, and coding expertise were sought.

The task force was formed in response to direction given the Board of Trustees by the House of Delegates at the 1999 AMA Annual Meeting in June.

The Board of Trustees will look for the task force to contribute recommendations on: the content of reports made to the House of Delegates on the E&M documentation system; issues related to E&M

documentation for which AMA policy does not provide sufficient guidance for AMA advocacy with HCFA; issues related to HCFA pilot testing of E&M documentation and review approaches; and issues arising during meetings of the House of Delegates.

The timing of the task force's initial meetings will be determined shortly. However, among the likely items to be discussed are HCFA's expected response to the technical assistance submitted by the CPT Editorial Panel in June, and the agency's intentions for pilot testing a new E&M documentation system.

Following the AMA's Annual Meeting in June 2000, the task force will advise the Board of Trustees on whether it should continue its work through December 2000.

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## Other States Craft Legislation for Use of Tobacco Settlement Monies

While Gov. Frank Keating has suggested spending "every penny" of the state's projected \$2.6 billion in tobacco-settlement money to help fund improvements in education, a national tobacco expert urged the governor and the Legislature to consider spending at least part of the funds on an anti-smoking campaign.

Representatives from Massachusetts and Florida urged Oklahoma to consider funding a campaign against tobacco use. Rep. Ray Vaughn (R-Edmond), requested Interim Study 99H-41.

Florida and Massachusetts are ahead of Oklahoma in their anti-smoking plans. Florida settled with the tobacco companies in a separate lawsuit in 1988, while Massachusetts instituted a cigarette sales tax seven years ago.

"We're just opening the lid on the can, at this point, in Oklahoma," Vaughn said. "It behooves us to look at states that have already been down the path before crafting one of these programs in Oklahoma. It always helps when you have some precedents in other states that you can look to."

*Excerpts reprinted with permission from Government Information Tracking*

## Nobel Prizes Recognize Medical Contributions

Doctors Without Borders, a volunteer organization created in 1971 to provide medical care to individuals who are wounded, sick, and starving in countries facing natural and human disasters, received the 1999 Nobel Peace Prize. Since its beginning, the organization's doctors have traveled to Nicaragua, Vietnam, Lebanon, Afghanistan, Ethiopia, Rwanda, Kosovo, and more recently, East Timor.

In granting the award, the five-member committee says of Doctors Without Borders, "National boundaries and political circumstances or sympathies must have no influence on who is to receive humanitarian help. By maintaining a high degree of independence, the organization has succeeded in living up to these ideals."

German-born biologist Guenter Blobel won the 1999 Nobel Medicine Prize for discovering how proteins are moved around cells, making it possible to use proteins to create drugs to fight hereditary diseases.

Blobel, 63, was awarded the prize for his discovery that "proteins have intrinsic signals that govern their transport and localization in the cell," Sweden's Karolinska Institute said in its citation.

## Joe Garagiola Talks to Oklahomans About Tobacco Use

Baseball great Joe Garagiola joined the fight against tobacco use on September 21 at the National Cowboy Hall of Fame and Western Heritage Center.

The event called attention to the serious problem of tobacco use and also benefited the Teen Tobacco Summit 2000, set to launch in January. The Summit is a statewide gathering of students whose purpose is to formulate plans for youth-led activities that encourage tobacco-free lifestyles.

Garagiola's visit and the Teen Tobacco Summit 2000 were sponsored by the Tobacco Free Oklahoma Coalition and the Governor's Task Force on Tobacco.

## First Steps Taken on Oklahoma Managed Care External Review Act

The wheels started turning September 1 on a new law that guarantees the right of every Oklahoman living under the managed-care plan to an external review by an independent organization whenever medical coverage is denied by a health-benefit plan.

HB 1826, by Rep. Betty Boyd (D-Tulsa), and Sen. Ted Fisher (D-Sapulpa), which creates the Oklahoma Managed Care External Review Act, was strongly supported by the OSMA, which actively negotiated the terms of this legislation.

The Act provides that insured people who have been denied coverage or reimbursement for treatment that exceeds \$1,000 have the right to an external review by an independent review organization.

---

Blobel, a cell and molecular biologist working at Rockefeller University in New York established the signal mechanisms by which vital proteins move between cells or within cells in living organisms ranging from yeast to human beings.

The Nobel prizes are a series of prestigious awards created in the will of Swedish industrialist Alfred Nobel, who died in 1896. Nobel established the prizes for "those who have conferred the greatest benefit on mankind," drawing on the fortune he had made partly from the invention of dynamite.

*(Associated Press, Oct. 15, 1999; Reuters, Oct. 11, 1999)*

## OBITUARIES

### Nolen L. Armstrong, MD 1917-1999

Nolen L. Armstrong, MD, died September 12, 1999. Born July 20, 1917, in Odessa, Mo., Dr. Armstrong received his medical degree from St. Louis University in 1948. During the Korean Conflict, he served as an aviation flight surgeon. Dr. Armstrong was a founder of the Mayfair Medical Center, served as chief of staff at both Deaconess Hospital and Willow View Hospital, where he was also a director. His professional affiliations included the Oklahoma Psychiatric Association, the Central Oklahoma Psychiatric Society, the American Psychiatric Association, the Oklahoma County Medical Society, and the Oklahoma State Medical Association, of which he had been a life member since 1989.

### George R. Randels, MD 1923-1999

George R. Randels, MD, died October 2, 1999. Born June 24, 1923, in Augusta, Kan., Dr. Randels received his medical degree in 1952 from the University of Oklahoma. During World War II, Dr. Randels served 42 months active duty in the U.S. Marine Corps. A member of the Oklahoma State Medical Association, Dr. Randels had been a life member since 1992.

## CLASSIFIEDS

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. *Payment must accompany all submissions.* Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 9th of the month prior to the month of issue (e.g., June 9 for the July issue).

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## IN MEMORIAM

### 1998

Joseph N. Mitchell, MD ..... December 23

### 1999

|                                  |              |
|----------------------------------|--------------|
| Thomas Edward Rhea, MD .....     | January 2    |
| H. Ben Yagol, MD .....           | January 19   |
| Fay Knickerbocker, MD .....      | February 6   |
| Ramon G. Blanco, MD .....        | March 5      |
| Neal A. Pickett, Jr., MD .....   | March 14     |
| Henry D. Wolfe, MD .....         | March 29     |
| Winfred L. Medcalf, MD .....     | April 1      |
| Robert P. Dennis, MD .....       | April 6      |
| Emil F. Stratton, MD .....       | April 7      |
| Carl W. Smith, Jr., MD .....     | April 8      |
| George L. Hill, MD .....         | April 20     |
| Jim M. Taylor, MD .....          | April 28     |
| T. Jeff Williams, MD .....       | May 17       |
| Thomas Ross Ahrend, MD .....     | May 23       |
| Lawrence E.C. Joers, MD .....    | June 5       |
| Hyman J. Drell, MD .....         | July 15      |
| Lee Bailey Word, MD .....        | July 22      |
| Dave B. Lhevine, MD .....        | July 31      |
| Michael Allan Houghton, MD ..... | August 16    |
| Webb M. Thompson, Jr., MD .....  | August 20    |
| Perry A. Lambird, MD .....       | August 25    |
| Nolen L. Armstrong, MD .....     | September 12 |
| George R. Randels, MD .....      | October 2    |

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## LETTER TO THE EDITOR

TO THE EDITOR:

I appreciate your recent editorial in the *Journal*. As a physician who left internal medicine training in 1975 and entered practice that same year I feel I have seen the very best medicine has to offer, and now its sinking to a low.

The physician in 1975 had the respect of his patient population; that same physician now, due to the constraints placed by the prescription service, is the scapegoat for the delay or denial in delivering appropriate medication.

All of us dislike the pharmaceutical companies having our patients educated on television, in the news, or by direct mail, many times on medications that have yet to be approved. "Just ask your doctor," the ad says. These medications, of course, are automatically denied by any system of managed care. It is truly hard to believe the written prescription is no longer of value without two faxes, a 1-800 call or two, and several visits with nondescript people (if lucky) in distant locations. You clearly understand these frustrations which you outlined in your editorial.

LETTER TO THE EDITOR  
submissions may be directed to:

**J. Michael Pontious, MD**  
Editor-in-Chief

via e-mail:  
[michael-pontious@ouhsc.edu](mailto:michael-pontious@ouhsc.edu)

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The big question, "Am I missing something here, is this system really messed up?" The real answer of course is "yes" and it's not going to change.

I retired from my practice in April of this year. Now, six months later, I dearly miss the many patients I helped over the past 24 years. However, I will tell you, I no longer have to deal with those "frustrations."

How do we change this mess? I don't know. Now as a non-practicing physician one of my concerns is about the quality of the health system my family and I will have available to us in the coming years. Blame? I don't pretend to know that either. I do feel, however, that it is true that "we have met the enemy and we are they."

Don Mace, MD  
Shawnee

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Articles submitted for publication become the sole property of the *Journal* and must not have been published elsewhere. The Editorial Board reserves the right to edit any material submitted.

Manuscripts must be formatted in a standard typeface, and the text must be double-spaced. Authors are required to submit their manuscripts on computer disk, preferably in Microsoft Word or WordPerfect (any PC version) or ascii/ansi dos text. The disk must be clearly labeled with the manuscript's title, author, and format. A clean printed copy of the document file(s) must accompany all submissions.

Biographical information for each contributing author must accompany the manuscript submission. This information must include: name; gender; mailing address; telephone number; fax number; school of graduation and year; specialty (if any); and current position, title or practice as it relates to the manuscript.

The *Journal* does not assume responsibility for the statements or opinions of any contributor.

### Style

All manuscripts should approximate the style adopted by the American Medical Association as illustrated in *JAMA* and detailed in the AMA's *Manual of Style*. An abstract of 150 words or less should accompany each manuscript, stating the exact question considered, the key points of methodology and success of execution, the key findings, and the conclusions directly supported by these findings.

Bylines may contain no more than six (6) names and shall include only those individuals who can attest that they have

contributed to the conception and design or analysis and interpretation of data, drafting the article or revising it critically for important intellectual content, and the final approval of the version to be published. Other contributors may be recognized in an acknowledgment.

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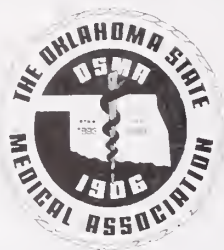
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### Course offerings from OSMA Accredited Institutions

#### Deaconess Hospital - Cyndi Nelson - 405-604-4979

Nov. 15 Hormone Replacement 6:30pm 1 hour

#### Duncan Regional Hospital - Amy Wade - 580-251-8648

Nov. 11 Asthma/COPD Update Noon 1 hour

Nov. 18 Hyperlipidemia in the  
Type II Diabetic Noon 1 hour

#### Irwin Brown Office of Continuing Medical Education-Letricia Harris- 405-271-2350

Nov. 6 Stroke Prevention and Treatment 4 hours

in the New Millennium (Series #0007)  
Nov. 18 Ft. Sill CME Series: Seizures and Epilepsy-  
"Modern Management of Epilepsy" in Lawton 2 hours

#### Integrus Baptist Medical Center-Donna Schoenfelder- 405-949-3284

Nov. 4 Cardiology Dept. - "CV Disease": Advances 7:00am 1 hour  
in Treatment & Prevention - "The Role of Antiplatelet Agents"

Nov. 5, 23 Tumor Board 7:00am 1 hour

Nov. 6 "Tackling CV Problems: What Every  
Primary Care Physician Needs To Know" 7:30am 4 hours

Nov. 8 "ANA and Other Tests You Wish You  
Never Ordered" 7:00am 1 hour

Nov. 12 Cancer Dept - "Cancer Genetics" 7:00am 1 hour

Nov. 13 OBGYN Dept. - "Internet Application &  
Medical Office Computer Application" 7:00am 1 hour

Nov. 16 Ophthalmology Dept. - "Updates in Cornea" 1 hour

Nov. 18 Management of Spasticity: Movement in  
the New Millennium 8:00am 7 hours

Nov. 19 Autopsy CPC-TBA Noon 1 hour

#### Mercy Health Center- Debbie Stanilla- 405-752-3806

Nov. 3,10,17,24 Tumor Board 7:00am 1 hr. ea.

Nov. 4 "Medication Misadventures" 12:15pm 1 hour

Nov. 16 NeuroScience Institute Lecture Series 7:00am 1 hour

Nov. 17 Ethics for Lunch Noon 1 hour

Nov. 18 "Organ Donation Intro." 12:15pm 1 hour

#### St. Anthony Hospital - Sandy Coury - 405-272-658

Nov. 1 Cancer Institute Case Presentations-TBA Noon

Nov. 8 Cancer Institute Oncology Grand Rounds-TBA Noon

Nov. 8 Grand Rounds - "Current Endoscopic Evaluation  
and Treatment Modalities For GI Diagnosis"

Nov. 15 Cancer Institute Case Presentations-TBA Noon

Nov. 18 Mental Health - "Mass Hysteria and the  
New Millennium" Noon

Nov. 22 Grand Rounds - "Breast Cancer Screening"

#### St. John Medical Center - Gail Hilst - 918-744-2875

Nov. 4 Critical Care Conf.: ACE Inhibitors Noon 1 hour

Nov. 11 Critical Care Conf.: Acute Meningitis Noon 1 hour

Nov. 16 Critical Care Conf.: Seizure & Status  
Epilepticus Noon 1 hour

Nov. 17 Taubman Symposium: Prostate Cancer 9:30am 4 hours

Nov. 18 Critical Care Conf.: SIADH Noon 1 hour

Nov. 19 Clinical Pathology Conf.: Osteoporosis Noon 1 hour

Nov. 23 Critical Care Conf.: Neuro Radiology Noon 1 hour

Nov. 30 Critical Care Conf.: ARDS Noon 1 hour

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator, at 405-843-9571.*

## Alliance Members-at-Large Can Make a Difference

**A**s Helen Keller once said, "We may have found a cure for most evils; but it has found no remedy for the worst of them all—apathy of human beings."

To be apathetic means to show a lack of concern or interest for others. It means to take no personal responsibility for helping improve your community.

You may feel you are too busy and have taken the attitude that someone else will do it. Your involvement, as a valued member, is essential to the support of our spouses and the medical community. Far too many people live with the impression that someone else will get the job done, but this is not always the case. For now is the time when, if we do not get involved, far less will be accomplished.

Take the time; obtain your membership in the AMA Alliance and the OSMA Alliance. This enables you to stand with 50,000 physician spouses and be part of the solution by participating in:

- \* *SAVE (Stop America's Violence Everywhere)—a nationwide grassroots initiative aimed at combating violence through a wide range of community-level programs.*
- \* *SAVE a Shelter (part of the SAVE program)—physician spouses across the nation are working with physicians to adopt abuse shelters, transition homes, and other services for abuse victims.*

- \* *Public health initiatives impacting the health of children, teens, and young adults.*
- \* *Leadership training and resources.*
- \* *New program development based on the changing social issues faced daily.*
- \* *AMA Foundation support to assure excellence in physician education through fundraising.*

Our newest state health initiative will be "Women and Girls, Tobacco and Lung Cancer"—a concerted effort to reduce smoking among younger women. Mary Anne McCaffree, MD, immediate past president of the OSMA, has been instrumental in putting this project together and gathering support from the OSMA and OSMAA.

In the coming year, the legislative agenda will include how to distribute tobacco settlement funds. The Alliance will be taking a stand to push for the funds to be used for tobacco prevention and smoking cessation programs.

We truly have a lot of work that needs to be done. Pick a cause...take a stand...get involved. Let us no longer be apathetic. Working together, with other Alliance members, you can make a difference for your spouse, your community, and yourself.

For more information or to join the Alliance as a member-at-large, contact Holly Cathey, OSMAA vice president of members-at-large, 918/423-1436.



Holly Cathey  
OSMAA Vice President  
of Members-at-Large

---

"Your involvement, as a valued member, is essential to the support of our spouses and the medical community."

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# THE LAST WORD

## **Membership Dues Decrease**

The AMA membership dues will be significantly lower this year, to \$300, down from the previous rate of \$378. The AMA has dropped its rate as a way of saying "thank you" to Oklahoma physicians for their continued support and unified membership with the AMA.

Member invoices will reflect the total membership fee, including county, OSMA, and AMA dues. Notices were sent in October to provide members a longer grace period before the January 1 due date.

## **Surgeon General Holds Briefing on Children's Health**

"There can be no doubt that children are the future. But every child's future could be very much in doubt if that child isn't afforded a healthy start," the U.S. Surgeon General David Satcher, MD, told an American Medical Association national briefing on children's health.

He said to meet the challenge, "the nation must focus its attention on giving every child a healthy start."

Dr. Satcher, who also serves as the assistant secretary of health, highlighted a number of areas that threaten the physical and mental well being of infants, children, or adolescents. These included the disturbing increase in asthma among young children; teens having babies when they are not prepared to be parents; a 90% immunization rate that leaves the rest of America's children vulnerable to serious, even deadly disease; and violence and abuse, outside and in the home.

The Surgeon General targeted four areas of special attention for children: increase activity level; decrease weight; decrease tobacco, drug, and alcohol consumption; and teach responsible sexual behavior. Satcher says providing a healthy start for every child takes a partnership among parents, the community, schools, faith-based organizations, and government.

## **AMA Appoints New JAMA Editor**

Catherine D. DeAngelis, MD, MPH, has been named editor of *The Journal of the American Medical Association (JAMA)* and editor-in-chief of AMA's Division of Scientific Information and Multimedia. Dr. DeAngelis will be the 15th editor of *JAMA* and the first woman to serve as editor in *JAMA*'s 116-year history.

## **OSMA Officers, Leadership, Staff Available to Meet County Medical Societies**

The OSMA officers, leadership, and staff are available to meet with County Medical Societies to discuss issues and programs of importance to those communities.

Often discussed are the Physician's Campaign for a Healthier Oklahoma, the Oklahoma Centralized Verification Organization (OCVO), OSMA state legislative activities, OMPAC, OSMA/AMA congressional legislative activities, Y2K readiness, and PLICO.

If your county medical society is interested in a visit from Boyd O. Whitlock, MD, president; Robert J. Weeden, MD, president-elect, or other OSMA officers, leadership, or staff, call Marilyn Fick at 1-800-522-9452 or 405-834-9571.

## **AMA Publishes "Cultural Competence Compendium"**

The American Medical Association (AMA) announced the release of the *Cultural Competence Compendium*, a resource book designed to help physicians understand their patients' complex cultural backgrounds. The purpose of the Compendium is to reinforce the concept of respectful communication and nurturing, and patient-centered care. The Compendium may be downloaded from the AMA free of charge, [www.ama-assn.org/diversity](http://www.ama-assn.org/diversity).

# JOURNAL

## **2000 Mark R. Johnson Competition for Excellence in Medical Writing**

**Students or residents at the University of Oklahoma College of Medicine  
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- \* The paper must be accepted by the editorial board and be published within the 2000 calendar year.
- \* The Editorial Board will judge entries for the best scientific paper or opinion piece at their annual meeting in the Spring of 2001.
- \* The winner (if any) will receive a \$500 cash award and will be announced at the Annual Meeting of the OSMA House of Delegates that same year.
- \* Presentation of the award in any given year will be dependent upon the receipt of eligible papers and at the discretion of the Editorial Board.
- \* Entries must be clearly labeled as a submission for the Mark R. Johnson Competition and should be mailed to:  
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**The memorial trust that funds the competition was established by the friends and family  
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# JOURNAL

OKLAHOMA STATE MEDICAL ASSOCIATION

DECEMBER 1999

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Photograph of holly berries from the backyard of William S. Harrison, MD, Chickasha.





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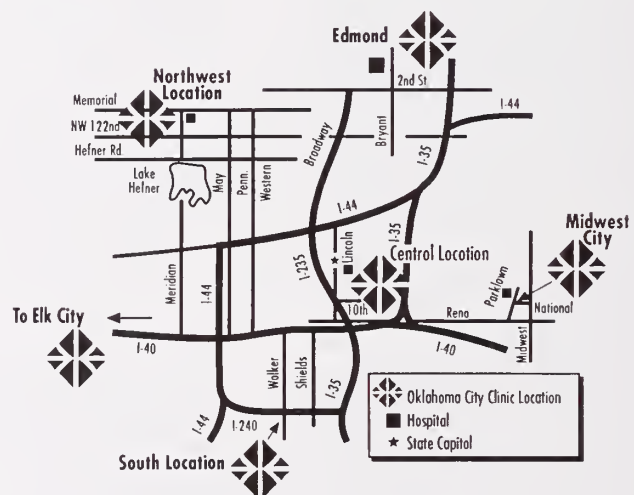
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## Among the Gravestones

This is the last editorial of the millennium. By the time you read this, your Y2K anxieties should be at their peak. Looking forward to medicine in the next millennium would be a logical approach for those of us who craft editorials. But alas, it is also a time for looking to the past.

There is a graveyard in Grant County, east of Pond Creek, Oklahoma. I stumbled across it one summer day many years ago, while I was supposed to be plowing. For those of you who have never plowed, it is mind-numbing work. I found myself doing anything I could to stay focused in the work. On my recurrent trip around this field, I noted a neglected, overgrown corner of the farm field. On one of my cycles, I stopped the tractor and explored this forsaken corner.

I found a forlorn graveyard. Here, buried under years of vines and weeds, were approximately ten to twelve headstones that served to document the short lives of infants, who all died between December 1899 and February of 1900.

These stones had an ongoing impact on the pre-medical college student who found them.

It must have been an extremely hard Oklahoma winter. The oldest infant was 6 months of age, each name clearly etched on those stones. I can imagine that each name was etched on the hearts of grieving parents. Parents who lived in the area known only as Oklahoma Territory. These children were born during a time in which little could be done to protect from diseases that you and I take for granted. Diseases that many of us have never seen or treated.

Why do those gravestones haunt me?

I think that it has something to do with understanding that life is difficult. That, although our science has taken us to realms unimaginable in 1899, we still struggle as a profession with the difficult lives of patients.

No matter how we try, we are unable to insulate ourselves from the "sticky" issues of difficult lives. The pregnant 15-year-old high school student, the 30-year-old patient who just discovered that he is HIV positive, the 40-year-old woman with a malignant lump in her breast, or the 50-year-old with crushing chest pain and diaphoresis. For each, their lives seem so difficult. For each, they have such a tough pilgrimage ahead. They have the difficult life to face.

As their physician, you too have a bit of problem explaining, understanding or accepting. I suppose it is no different in 1999 than it was in 1899, or, for that matter, 2099.

The gravestones caused me to ponder. Was there an influenza epidemic in December 1899? Was it whooping cough that swept through rural Grant County, Oklahoma? How about a contaminated water supply, which resulted in bacterial contamination, diarrhea, and subsequent dehydration? I wonder how far the nearest physician was officed? Dr. Coldiron was in Perry, but that was over sixty miles away. I understand that Dr. Humphry had arrived in Enid about that time, but that is another thirty miles away. Could they have kept them comfortable? Could they have saved them?

Would they have taken their Medicaid?

You will notice that I didn't include in my differential maternal transmission of HIV, nor child abuse; and I did not include a gunshot wound as the reason for these gravestones. I suppose these are our epidemics. I suppose these are the things that some college kid will ponder in 2099, when she reviews the gravestones of our buried children.

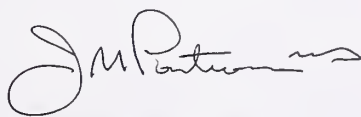
We are entering the new millennium. Has so much changed from that Oklahoma winter in Grant County one hundred years ago?

There are lots of causes; there are lots of addressable health care problems. But I fear that physicians have different agendas these days. I participate in the Doctor's Lounge conversations, in which I would rather complain about the paltry funding for managed Medicaid and the fact that there are no specialists signed up as providers. I might be a bit too busy to discuss family stress or to worry about being too bold in intervening in domestic violence or child abuse. Then there is Oklahoma's paltry performance in infant immunization or cancer surveillance or smoking cessation or problem drinking interventions.

If those infants had lived, it is hard to imagine the changes that they would have experienced in the world around them. It is a major quandary to lose ten infants during a winter in northern Oklahoma.

Not in 1899—they just passed and quietly rest there to remind us of a time gone past.

We stand at that same position. Where are we going as a profession? What impact are we going to have on the communities that we serve? The gravestones will tell our story. Are you ready for the members of the next millennium to read our gravestones?



J. Michael Pontious, MD  
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# PRESIDENT'S PAGE

## Happy Holidays!

**W**e are in the midst of the most joyous time of the year. Thanksgiving just past, we gave thanks for our many good fortunes...our families, our health, our God and for the opportunity of living with the finest people in the greatest country in the world. We once again remembered how the good things in life far outweigh the bad, and asked God to help us appreciate all this now and to remind us to do the same throughout the year ahead.

Now as we near Christmas and Hanukkah and are enjoying the crisp, late fall weather, listening to holiday music, and spending time with family and friends, we should slow down and take time to realize how lucky we are.



Let's think about the true meaning of "the holidays." Let's understand which things in life are truly important. Let's be thankful that we live in a great time and that we are able to practice medicine in Oklahoma, America. Let's appreciate our fellow physicians and our co-workers. Let's ask God to help us in the coming year to be good physicians, good husbands and wives, and good fathers and mothers. Let's be ever mindful of our association and its need for our support.

Have a super holiday season! Enjoy life! Remember why we're here! As Martha [Stewart] would say, "It's a good thing!"

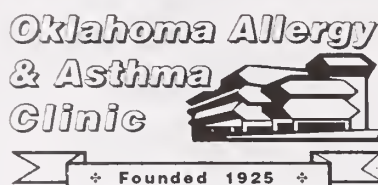
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## Isolation of Avian Influenza Viruses in Central Oklahoma

Alexander C.K. Lai, PhD; Andrea M. McPhillips

Aquatic birds are the natural hosts for influenza virus. It is established that avian influenza viruses provide the gene pool for the generation of new strains of human influenza virus, which can cause pandemic infections. The recent outbreak of an avian influenza virus (H5N1) in Hong Kong not only produced high mortality in chickens, but also resulted in six human fatalities. This outbreak indicates that avian influenza virus can be pathogenic for humans.

We surveyed local waterfowl habitats by taking water and fecal samples for virus isolation and identification. We isolated avian influenza viruses from ponds and small lakes in Bartlesville, Lawton, Stillwater, and Tulsa. The density of birds in these sites is small. However, our virus isolation rate is comparable to that found in higher density habitats. The risk of human infection remains to be determined. We encourage primary care physicians to submit samples for virus surveillance.

### Introduction

Influenza virus is a highly contagious infectious agent for the upper respiratory tract in humans. Typically, it causes a febrile, self-limiting, acute respiratory disease. Viral replication is usually restricted to the respiratory tract, but clinical symptoms extend beyond the site of viral replication. The signs and symptoms are often labeled as "flu-like" symptoms.<sup>1</sup> In otherwise healthy persons, recovery is usually uncomplicated. However, outbreaks in long-term care facilities for the elderly can result in high morbidity and mortality. The Centers for Disease Control and Prevention estimates that in the United States, an average of 20,000 persons die each year from influenza.

Influenza virus is a member of *Orthomyxoviridae*.<sup>2,3</sup> The viral genome consists of eight negative-sense segmented RNA molecules. The lack of proofreading during replication gives rise to genetic diversity—the basis of "antigenic drift"—and hence the requirement for annual vaccination. There are three types of influenza viruses that infect humans—type A, B, and C. Influenza A virus is further classified into subtypes based on the antigenicity of viral surface proteins, the hemagglu-

tinin (HA) and the neuraminidase (NA). Fifteen HA subtypes and nine NA subtypes have been identified, of which only H1N1, H2N2, and H3N2 subtypes produce disease in humans. At present, only H1N1 and H3N2 subtypes of type A influenza virus are in circulation. The vaccine for the 1999-2000 season has been formulated; it consists of A/Beijing/265/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/262/95-like (for type B influenza virus) HA antigens.<sup>4</sup>

A unique and unusual characteristic of influenza A virus is its ability to cause pandemics, resulting in excess morbidity and mortality. The three "undisputed" pandemics<sup>5</sup> in this century—"Spanish Flu" (H1N1) of 1918, "Asian Flu" (H2N2) of 1957, and "Hong Kong Flu" (H3N2) of 1968—resulted in excess mortality, ranging from 30,000 to 500,000.<sup>6</sup> The pandemic of 1918 was the most lethal of all, with an estimated 20 million deaths worldwide.<sup>7</sup> These pandemics occur due to an "antigenic shift" in the virus, which results in the generation of a new human virus. These antigenic shifts occur periodically and are unpredictable.

Aquatic birds are natural reservoirs of influenza A viruses.<sup>8</sup> Transmission is via oral-fecal route. All 15 HA subtypes are found in the avian species. It is generally believed that these avian viruses provide the gene pool for new human viruses through genetic reassortment,<sup>9,10</sup> a process involving a third host, the swine. Pigs are susceptible to both avian and human influenza viruses. During a co-infection, the viral surface protein of human influenza virus is replaced by an avian influenza virus. This results in a major alteration of the antigenicity of the human influenza virus, hence an antigenic shift. Southern China appears to be the "epicenter"<sup>11,12</sup> for generation of pandemic strains. This is possibly due to high-density co-habitation of swine, domesticated ducks, and humans.

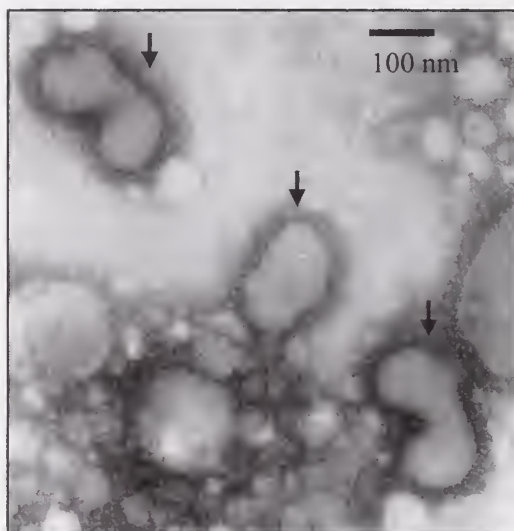
The recent outbreak of H5N1 ("chicken flu") in Hong Kong illustrates that avian influenza viruses can be highly pathogenic in humans<sup>13</sup> without the usual reassortment process. Direct transmission of avian influenza viruses to humans (and other mammals) is rare, but does occur.<sup>14-16</sup> Several cases of mild disease caused by an avian influenza virus

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## Isolation of Avian Influenza Viruses

**Table 1. Isolation of Avian Influenza Viruses from Waterfowl Habitats in Central Oklahoma**

| Locations  | Isolates/Samples | Hemagglutination Titer (Egg Passage 1) | Avian Species |
|--|------------------|--|---------------|
| <b>Bartlesville</b>  |                  |  |               |
| • Water Samples  | 3/16             | 8, 8, 8 (Median: 8)                    | Canada Geese, |
| • Fecal Samples  | 3/15             | 1, 2, 512 (Median: 2)                  | Snow Geese    |
| <b>Lawton</b>  |                  |  |               |
| • Water Samples  | ND               | NA                                     | Canada Geese, |
| • Fecal Samples  | 3/12             | 8, 16, 16 (Median: 16)                 | Mallards,     |
|  |                  |  | Snow Geese    |
| <b>Stillwater</b>  |                  |  |               |
| • Water Samples  | 1/13             | 2                                      | Canada Geese, |
| • Fecal Samples  | 0/8              | NA                                     | Mallard,      |
|  |                  |  | Mute Swan,    |
|  |                  |  | Snow Geese    |
| <b>Tulsa</b>   |                  |  |               |
| • Water Samples  | 1/4              | 1                                      | Canada Geese, |
| • Fecal Samples  | 0/4              | NA                                     | Mallards      |
| Overall rate: 15.3 percent; ND: not done; NA: not applicable |                  |  |               |



**Figure 1. Electron micrograph of an avian influenza virus isolated from Lawton, Oklahoma. Viral sample was concentrated by centrifugation of allantoic fluid at 110,000 g for 30 minutes. Arrows indicate viral particles with a typical morphology for influenza virus.**

subtype H9N2 in Hong Kong (and in mainland China) early this year illustrates that these infections might be occurring more frequently than previously understood. Because of the potential risk of human infections, we investigated the virological status of local aquatic habitats within Oklahoma. It is also interesting to note that, based on epidemiological analysis, it has been speculated that the 1918 pandemic strain originated from Kansas.

### Material and Methods

Fresh fecal droppings were swabbed with a cotton

swab, followed by placing the swab into 3.0–5.0 ml of phosphate-buffered saline (PBS) containing 5 µg/ml penicillin, 10 µg/ml streptomycin, 0.5 µg/ml amphotericin, and 10 µg/ml gentamycin. The suspension was then centrifuged at 700 g for 20 minutes, followed by inoculation of 0.1 ml of the supernatant into the allantoic cavities of 10- to 11-day-old fertilized chicken eggs. For water samples, aliquots of 10.0–15.0 ml water were collected in close proximity to the aquatic birds. The water was then mixed with 1.5 ml 2.5 percent chicken erythrocytes for 30 minutes at room temperature, followed by centrifugation at 700 g for 10 minutes. The chicken erythrocytes were resuspended in 1.0 ml PBS containing antibiotics. The suspension was subjected to a brief sonication to disrupt the red blood cells, followed by inoculation into fertilized eggs as above. At least four eggs were used for each sample. The eggs were incubated at 37°C for 72 hours. The allantoic fluid was harvested for virus detection. Presence of influenza virus was determined by hemagglutination assay, by Directigen FLU-A influenza virus detection kit (Becton Dickinson Microbiology Systems, Cockeysville, Maryland), by electron microscopy and by genetic analysis employing RT-PCR and HA specific primers.

### Results

Both water and fecal samples were collected from several small ponds and small lakes in Bartlesville, Lawton, Stillwater, and Tulsa. The majority of birds in these habitats are several species of ducks, snow geese, and one mute swan. However, migratory geese (Canada geese) and mallards are spotted occasionally in these habitats. As shown in Table 1, 15.3 percent of samples tested positive for influenza virus, which is comparable to the results obtained elsewhere.<sup>17-20</sup> An ongoing longitudinal study to address if there is seasonality in virus isolation is in progress. Figure 1 is an electron micrograph of an isolate from Lawton, Oklahoma. Viral particles, as indicated by the arrows, show a typical morphology for influenza virus. Detection of paramyxoviruses in some of the samples suggests co-infection of the host, which is also common.<sup>21</sup>

### Discussions

Pathogenicity of avian influenza viruses in humans is demonstrated by the H5N1 outbreak in Hong Kong. Since this virus represents a new antigenic virus, it was feared that it might start a pandemic. The potential "pandemic" was averted by the depopulation of chickens in Hong Kong, and by the apparent non-transmissibility of this virus from human to human. However, a pandemic caused by a new human influenza virus is believed to be inevitable. Current research is therefore focused on

surveillance and to identify potential sources of new human influenza viruses.

The occurrence of influenza viruses in aquatic avian species is not uncommon, and virus infection in these hosts is non-symptomatic. Due to the low density of avian species and the scattered distribution of aquatic habitats in Oklahoma, it was not previously known if the avian species in these local habitats were infected with influenza virus. Our result indicates that the isolation rate is comparable to isolation rates obtained from other locations with a higher density of habitation. Since influenza virus infection in waterfowl is eventually resolved, it is not known how the viruses are maintained in these low-density inhabitation sites. Furthermore, at least some of the birds appear to be non-migratory "residents" in our sampling sites. It is possible that avian influenza viruses are introduced by migratory birds. Canada geese and other mallards are known to stop briefly in these locations during migratory seasons. Antigenic and genetic characterization of the viruses are being performed to address this question.

Does the presence of avian influenza viruses in these habitats pose any risk to humans? It is believed that most, if not all, of the human cases in Hong Kong during the H5N1 episode had contact with infected chickens.<sup>22</sup> There are other reports of human infections with avian influenza viruses through close contact with avian species. Direct inoculation of avian influenza viruses to human volunteers resulted in mild disease, with an induction of specific immune response.<sup>23</sup> Seroprevalence survey of poultry farm workers indicates exposure and seroconversion by avian influenza viruses is quite common,<sup>11</sup> and infections by avian influenza viruses are usually without overt clinical symptoms. The extent of avian influenza virus infections in the general population is unknown. It may be difficult to determine, due to the lack of clinical symptoms, or atypical symptoms, which may lead to misdiagnosis. It is expected that due to the low frequency of virus detection (possibly at very low concentrations), contaminated water poses a very minimal risk for human infections. However, a higher titer of virus is excreted in feces from infected birds and the potential risk remains to be determined.

Influenza is not a notifiable disease in Oklahoma and surveillance relies on reports from a network of sentinel physicians based on clinical presentations. In order to have a better and meaningful surveillance, we recommend that primary care physicians submit nasal swabs or nasal secretions from suspected patients for virological identification. It should be noted that if not for the established procedure of virological surveillance and identification, the H5N1 outbreak in Hong Kong might not have been attributed to an avian influenza virus.

## Conclusion

Aquatic birds are natural reservoirs of avian influenza virus. We have isolated several avian influenza viruses from local waterfowl habitats. The isolation rate is about 15 percent, which is comparable to other habitats with higher densities of birds. Viruses were found in both water samples and fecal samples.

## Acknowledgement

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## **Fiberoptic Bronchoscopic Placement of Self-Expandable Metallic Airway Stents for the Treatment of Tracheobronchial Obstruction and Fistulas**

Aaron L. Boyd, MD; Brent R. Brown, MD

Tracheobronchial stent use has been reported in the medical literature for more than 40 years. Silicone stents are the most widely used stents in therapy for varying tracheobronchial lesions at most centers. However, newer designs and modifications of stents are now available with delivery systems that have been designed to facilitate using fiberoptic bronchoscopy.

We describe our initial experience placing 13 self-expandable metallic Wallstent™ stents, including the covered design, in a total of seven patients via a fiberoptic bronchoscope. All patients had benign or malignant obstructing lesions and one patient had an associated malignant tracheoesophageal fistula. The procedure was technically easy and was well tolerated. Following stenting there was a visible increase in airway diameter and a marked improvement in symptoms for all patients. Median survival after stent placement is currently 10 months.

### **Introduction**

Airway stents use was first reported nearly 50 years ago.<sup>1,2</sup> Subsequent application techniques and stent designs have changed dramatically.<sup>3</sup> These developments have proceeded primarily down two pathways, modifications of silicone stent types and the development of expandable wire stents.

Montgomery<sup>3</sup> described the use of a silicone T-tube to stent the trachea in 1965. More recently Dumon<sup>4</sup> made modifications to the original Montgomery T-tube and created a new silicone stent, a redesigned rigid bronchoscope and an introducer system which are widely used today.

Expandable metallic stents got their start in the 1980s chiefly through the work of Cesar

Gianturco.<sup>5</sup> He created a vascular expandable wire prosthesis and Wallace et al<sup>6</sup> reported successful placement of the stent in the human airway in 1986. The majority of wire stents used today are modified Gianturco stents or are founded in its original design. Many wire stents have been adapted from initial use in other organ systems, i.e. vascular and hepatobiliary. Functionally most wire stents fall into one of two categories—self-expanding metallic stents (SEMS) and those that require balloon dilation for expansion.<sup>7-9</sup>

We describe our experience using the self-expandable vascular stent Wallstent™, which has been modified for use in the tracheobronchial tree. It is mounted on a flexible delivery system that allows fiberoptic bronchoscopic placement.

### **Methods**

Wallstent™ placement was accomplished using techniques previously described.<sup>10-12</sup> Fluoroscopy was used in all patients. Intravenous conscious sedation and local anesthesia with 1% topical lidocaine were employed.

Bronchoscopic examination of the proximal and distal ends of the obstructed/narrowed region or fistula were determined and identified with radiopaque skin markers. In the event that the obstructing lesion was too narrow to allow passage of the bronchoscope, a 0.035-inch guidewire (length 180 cm) was inserted through the working channel of the bronchoscope, and passed beyond the obstruction. The bronchoscope was removed and a standard angioplasty system was employed. The balloon catheter was passed over the guidewire and balloon dilatation was used to increase the diameter of the stenotic area. Following this step, the limits of the lesion were determined as described above.

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**Table 1. Clinical Data to Follow Up in Six Patients Treated with Wallstent™ Placement**

| Patient Number | Age, Gender | Diagnosis   | Symptoms  | Bronchoscopic Findings   | Stent (Number), Size and Location   | Setting                                     | Outcome/Follow-Up   |
|----------------|-------------|---|---|--|---|---|---|
| 1              | 35, M       | NSCLC, Stage III B  | Hemoptysis, SOB, attempts to lie flat result in severe orthopnea              | 90% narrowing at RMB origin and distal trachea by tumor and extrinsic compression                | (2) 20mm x 40mm<br>Distal Trachea   | Inpatient, following urgent intubation      | Extubated post procedure, able to lie flat for XRT and receive CTX<br>Deceased at 22 months   |
| 2              | 75, M       | Benign, post XRT  | SOB, orthopnea  | Extrinsic compression of distal trachea  | (1) 20mm x 55mm<br>Distal Trachea   | Inpatient non-intubated                     | Discharged from hospital able to lie flat for XRT<br>Deceased at 10 months                    |
| 3              | 66, M       | Benign, post XRT  | Persistent cough, recurrent left sided pneumonias                             | LMB narrowing and collapse with expiration   | (1) 12mm x 40mm<br>LMB  | Inpatient non-intubated                     | Discharged from hospital, improved cough and no recurrent pneumonias<br>Deceased at 14 months |
| 4              | 78, M       | NSCLC, Stage III B  | Dysphagia, hemoptysis, orthopnea  | Narrowing of RMB and LMB with marked distortion of the carina by tumor and extrinsic compression | (2) 12mm x 40mm<br>[Covered] LMB<br>(1) 12mm x 40mm<br>[Covered] RMB  | Outpatient with overnight observation       | Underwent XRT<br>Deceased at 4 months   |
| 5              | 59, F       | NSCLC, Stage III B, with tracheo-esophageal fistula, status post esophageal stent | Recurrent pneumonia ventilator dependence                                     | Narrowing of LMB, distortion of the carina and visualization of esophageal stent                 | (1) 12mm x 40mm<br>[Covered] LMB<br>** (2) 12mm x 40mm<br>[Covered] RMB and LMB<br>** (1) 20mm x 40mm<br>Distal trachea | Intubated<br><br>** Inpatient non-intubated | Extubated 10 days later<br><br>Discharged from hospital<br>Deceased at 3 months               |
| 6              | 57, M       | NSCLC, Stage III B  | Hemoptysis, increasing SOB  | Polypoid mass in proximal LMB with 90% occlusion and tumor extension into distal LMB             | (1) 12mm x 40mm<br>[Covered] LMB  | Outpatient with overnight observation       | Underwent CTX, followed by XRT<br>Deceased at 14 months                                       |
| 7              | 51, F       | Limited Small Cell  | Complete atelectasis of right lung, respiratory failure ventilator dependence | Fungating mass involving the proximal 2/3rds of the lateral wall of the bronchus intermedius     | (1) 12mm x 40mm<br>RMB  | Intubated                                   | Extubated,<br>Discharged from hospital<br>Undergoing CTX and XRT<br>Alive at 2 months         |

\* NSCLC = non small cell lung cancer; SOB = shortness of breath; RMB = right mainstem bronchus; LMB = left mainstem bronchus; XRT = external beam radiation therapy; CTX = systemic chemotherapy

\*\* Done in a second procedure, one month after the first, following placement of a second esophageal stent (see text)

Prior to stent deployment the location of the radiopaque skin markers was confirmed, the integrity of the stent was examined and the delivery system was tested for patency. Following removal of the bronchoscope the Wallstent™ delivery system was passed over the guidewire. The stents' distal radiopaque mark was positioned beyond the distal skin marker. The bronchoscope was repositioned alongside the delivery system allowing direct visualization of stent deployment.

Once in position, the delivery system is held in place as the outer sheath is slowly pulled proximally allowing for uncovering and expansion of the stent. The stents shorten to pre-mounted lengths as they are deployed, thus, once partially deployed the entire system is pulled proximally bringing the distal end of the stent in closer proximity to the distal skin marker, followed by further deployment. This is repeated in a stepwise fashion throughout deployment so that at total deployment the distal end of the stent is aligned with the distal skin marker. When deployment is complete, the delivery system and guidewire are carefully removed.

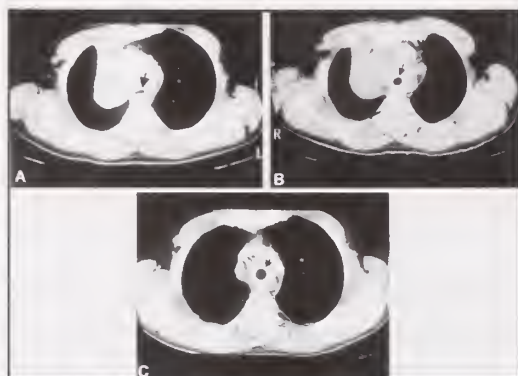
When deploying covered stents, pressurizing the outer sheath so that it is lifted away from the

membrane covering is required. This is accomplished by applying four atmospheres of pressure for one minute via a saline filled insufflation syringe applied at the distal port of the delivery device, followed by closing the stopcock so deployment can proceed. If re-constraint of the stent is needed, the stopcock is opened and all the saline is aspirated. Repositioning can proceed at this point and re-pressurizing is required prior to further deployment.

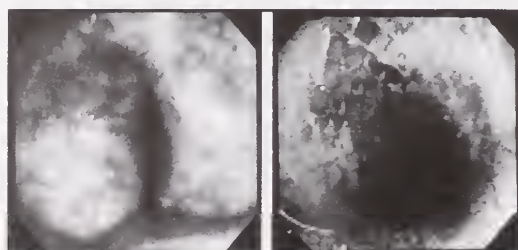
In three patients, multiple stents were placed during one setting. In these instances, the guidewire was passed through the lumen of the existing stent and deployment was completed as described above. The distal end of the subsequent stent was situated (overlapped) inside the initial stent. In cases due to malignant obstruction or fistulas, careful attention was made to insure the membranous coverings of the stents were contiguous.

## Results

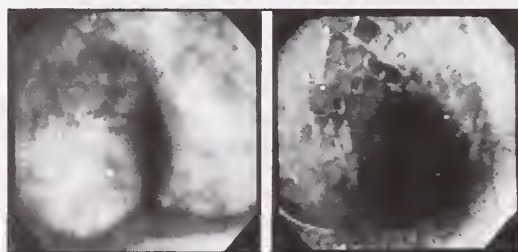
In our institution, between December 1995 and March 1999, seven patients received a total of 13 separate stents, including six covered stents.



**Fig 1**—Serial computed tomography of chest in patient 1. Panel A indicates the distal tracheal obstruction (arrow) one day prior to stent placement. Panel B illustrates stent position and improved diameter of the distal trachea (arrow) the day after placement. Panel C demonstrates continued patency of the distal trachea with further improvement in the diameter (arrow) one year following stent placement.

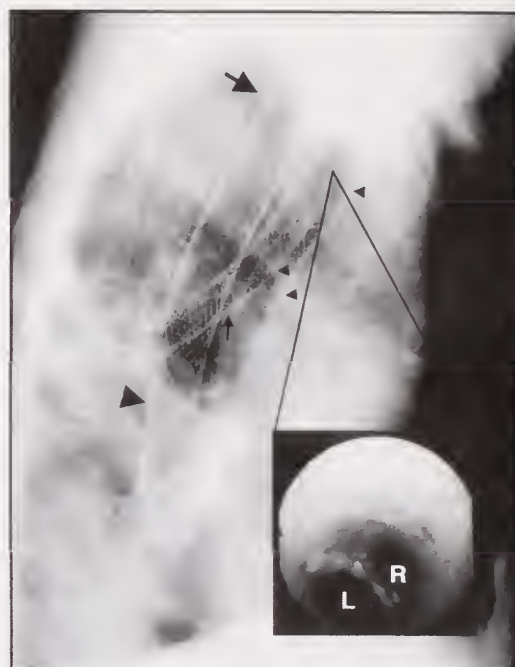


**Fig 2**—Bronchoscopic view of the distal trachea in patient 2. The left panel depicts the narrowed portion pre-stenting and the right panel demonstrates the improved patency following stent placement.



**Fig 3**—Bronchoscopic view, at end expiration, of the left main stem orifice in patient 3. The left panel illustrates complete collapse of the lumen (arrow) with expiration. The right panel demonstrates marked improvement in airway diameter, at end expiration, following stent placement.

Clinical characteristics and general results for all patients are summarized (Table 1). There were five males and two females, with an average age of 60 years (range 35 to 78 years). The indications for stenting were malignant obstruction (n=4), malignant fistula (n=1) and benign obstruction (n=2). The clinical setting for the placement procedure varied from ambulatory



**Fig 4**—Lateral chest roentgenogram with bronchoscopic view (insert) in patient 5. The large arrows represent esophageal stents and the smaller arrows depict airway stents. Complete arrows denote stents placed initially and arrow heads alone indicate stents placed a month later (see text). The insert illustrates the right (R) and most proximal left (L) main stem bronchial stents extending up into the distal tracheal stent.

outpatients to patients with respiratory failure and ongoing mechanical ventilation.

Four stents were placed in three patients while intubated and receiving mechanical ventilation. Seven covered stents were deployed in three patients and two patients received three stents, each at one setting.

All patients tolerated the procedure well. There was immediate improvement in airway patency in all patients and all experienced lessened respiratory symptoms. All patients requiring mechanical ventilation were successfully weaned following stent placement and all inpatients were discharged.

Patient 1 required emergent stenting for an occluded airway resistant to mechanical ventilation. He had improvement in his FEV<sub>1</sub> from 51 percent to 72 percent, following stent placement and improvement in airway diameter was demonstrated immediately following the procedure and at one-year follow up (Fig 1). An increased diameter of the distal trachea was observed following stent placement in the second patient (Fig 2). Patient 3 had an increased expiratory diameter of the proximal left main stem bronchus subsequent to stent placement (Fig 3). In two separate proce-

dures, patient 4 had four total stents placed, resulting in continuous stents extending from the distal trachea bilaterally to just proximal to the orifices of the right and left upper lobe orifices (Fig 4). Stenting allowed her to be successfully weaned from long-term mechanical ventilation and to take p.o. without evidence of aspiration.

Long term tolerance of the stents has been excellent as well. There have been no identified subjective problems such as pain, persistent cough, or foreign body sensation. There has been no evidence of obstruction or infection of the stents, nor has there been any evidence of device migration or erosion into the airway wall.

The mean survival, after stent placement, for those with malignancy and those with benign lesion was 10.75 and 12 months, respectively (range three to 22 months). Of note, the two patients stented for benign lesions succumbed to complications of malignancy elsewhere. Follow-up on all patients, to this point, has been complete.

### Complications

There were only two minor complications experienced during the placement procedure. In each of two patients, patient 3 and patient 5, the first stent, once fully deployed, was in an unsatisfactory position and was removed without problem.

In some cases, due to placement across highly stenotic lesions, a portion of the stent did not expand to a desirable diameter. These included the proximal end of the single stent in patients 3 and 7, the combined portion of the initial two stents in patient 4, the distal end of the initial stent in patient 5. In these cases, a guidewire was passed through the lumen of the stent (stents) and using an angioplasty system, the compressed segment was balloon-dilated to a larger diameter.

### Discussion

From initial use in the vascular system to their use in the tracheobronchial tree of humans, the application of tracheobronchial expandable metallic stents has grown dramatically over the past decade. The literature pertaining to the use of Wallstent™ vascular stents placed via flexible fiberoptic bronchoscope continues to increase.<sup>13-17</sup>

The list of indications for the application of SEMS is likewise increasing (Table 2). Certainly there is considerable experience with expandable stent use in malignant obstruction whether it be due to external compression or intra-luminal occlusion or both.<sup>11,12,14,15,17</sup> Occasionally, stenting is used as an emergent initial therapy, but more commonly, SEMS are used in a more elective role to relieve airway symptoms enough to allow for other forms of therapy to be initiated, particularly exter-

**Table 2. Indications for the Use of Expandable Metallic Stents in the Tracheobronchial Tree**

| Malignant Obstruction  | Benign Obstruction  | Fistulas  |
|--|---|---|
| Primary lung or esophageal cancer, malignant adenopathy or metastatic disease causing extrinsic compression and/or intraluminal obstruction  | Past infectious or inflammatory, causing obstructing adenopathy or fibrinous mediastinitis                | Usually malignant disease, possibly benign, with fistula formation between the tracheobronchial tree and mediastinum, pleura or esophagus |
| Primary therapy in the acutely symptomatic or in combination with or following failure of other forms of intervention, i.e. laser photo resection (LPR), photo dynamic therapy (PDT), cyrotherapy, balloon branchoplasty, external beam radiation or brachytherapy | Trauma following intubation, external beam radiation, LPR, balloon branchoplasty or surgical intervention |   |
|  | Benign tumors   |   |
|  | Tracheobronchial malacia of any etiology  |   |
|  | Anastomotic strictures after lung and heart-lung transplant   |   |

nal beam radiation. In some centers, airway compromise from benign disease is the most common etiology for the use of SEMS, particularly in the areas of post lung transplantation anastomotic strictures and tracheobronchial malacia. The newest application, with the availability of covered SEMS, is in therapy for airway fistulas.<sup>11,12,15,17</sup>

The placement of SEMS via fiberoptic bronchoscope and fluoroscopic guidance, using only conscious sedation and local anesthesia, has now been well described.<sup>10-12,14,15,17,18</sup> This not only has cost advantages, but the adaptability allows for a wide scope of patient populations and settings, including procedure performance on critically ill patients at the bedside. The versatility of the intervention allows the lumen requiring stenting to be only large enough to allow passage of a small balloon catheter (0.066 inch diameter in our cases) for dilatation prior to stent installation.

Complications of SEMS can roughly be divided into three main areas—dysfunction of the stent itself, peri-procedure events and late complications. With regard to stent dysfunction, the degree of mechanical problems is low with the newer designed SEMS. Operator error, with stent malposition or airway trauma, has become less of a problem as the devices have improved and deployment experience has increased. In two of the most recent reports, 83 of 87 stents in 64 patients were successfully deployed.<sup>15,17</sup> Procedure-related problems are also likely to be attributed to the increased morbidity and mortality of the patient population undergoing stenting.

Late complications of expandable airway stents are mainly tumor or granulation tissue in growth creating partial or complete re-occlusion of the

airway. The magnitude of this problem has diminished greatly by the use of the new covered stents. The study conducted by Bolliger et al<sup>18</sup> using the covered Wallstent<sup>TM</sup> reported that only four patients (15%), required further intervention for granulation tissue formation at the uncovered ends of the stents. Additional late complications observed in most studies include stent migration and retained secretions.

In comparison to other forms of endoscopic therapies for airway malignancy, the overall complication rate of expandable stent placement is comparable.<sup>19</sup>

The main disadvantage of any expandable stent, when compared to silicone stents, has been the inability to remove expandable stents once placed. Future design modifications may permit recapturing a completely deployed SEMS. This would allow removal of a stent at the time of the placement procedure or potentially anytime prior to complete neopithelialization.

Overall outcomes in patients who received SEMS is encouraging. Improved patency of the stenotic region is almost universal and palliation of symptoms is excellent.

Changes in mortality for malignant airway disease are not as obvious or as expected. To our knowledge, there is no mortality data comparing stent placement to other forms of therapy in malignant tracheobronchial disease. However, the literature does describe improved quality of life and prolonged survival in many cancer patients who have received stents. This is due to relief of potentially fatal airway compromise and fistulas generalized improvement in respiratory and/or clinical status. Regardless, stenting allows selected patients to undergo more decisive treatments that would ordinarily not be offered or tolerated.

## Conclusion

There have been tremendous improvements in the design of airway stents in the last few years. They have evolved into a highly flexible self-expanding prosthesis that can be deployed using flexible bronchoscopy and fluoroscopy. There is an increasing number of reports in the literature describing the successful use of SEMS in the treatment of both benign and malignant airway diseases.

Airway stenting has become a mainstay in malignant tracheobronchial therapy not only in palliation but also as a primary intervention. The greatest advantage appears to be the ability to improve critical respiratory and/or clinical status to permit further therapy and thus potentially change mortality. Also, the availability of covered

airway stents has created another modality in the difficult management problem of fistulas.

Stenting has also been shown to complement other forms of cancer therapy, including additional endoscopic treatments, external beam radiation, systemic chemotherapy and surgery.

Additional studies using SEMS are needed to further define the indications and make comparisons with other therapeutic modalities. Nonetheless, SEMS can be added to our armamentarium in treating tracheobronchial diseases and are already beginning to have an impact. J

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## Utilizing Daily Interferon (Alpha 2b) and Ribavirin Combination Therapy in Chronic Hepatitis C: A Preliminary Report

Zeki Karasu, MD; Ahmet Gurakar, MD; Carolyn Emmett, RN; Ahmad Jazzar, MD; Greg McMillon, RN; Saadettin Hulagu, MD; Harlan Wright, MD

The optimal dose, frequency and duration of interferon alpha 2b and ribavirin combination for the treatment of chronic hepatitis C is still not clear. Preliminary hepatitis C virus kinetic studies have suggested that daily interferon (IFN) is more advantageous than less frequent administration. This report documents the preliminary findings of an investigative protocol to evaluate the efficacy of long-term (12 month), daily IFN alpha 2b and ribavirin combination therapy for chronic hepatitis C patients, who have either relapsed (relapsers) or not responded (non-responders) to previous IFN therapy.

**Methods:** 25 non-cirrhotic HCV patients were enrolled in an attempt to treat protocol. Patients were administered 3 million units (MU) IFN alpha 2b subcutaneously (SQ) and ribavirin 1000-1200 mg PO on a daily basis.

**Results:** Four patients were removed from the protocol because of noncompliance. The remaining 21 patients (10 relapsers, 11 non-responders) were evaluated at the end of their 12th week of treatment. Twelve patients (57%) became HCV-RNA negative and nine patients (43%) remain positive at the end of this period.

**Conclusion:** Although further studies on larger patient populations are necessary, our preliminary data suggests that daily IFN alpha 2b and ribavirin treatment is highly effective, especially among patients who have relapsed from previous IFN treatment.

### Background

Chronic infection with hepatitis C virus (HCV) is one of the most important public health concerns. It is estimated that more than 4 million

Americans are affected, as well as a total of 170 million individuals worldwide.<sup>1,2</sup> The disease is insidious, and most patients do not have jaundice or clinical signs at the onset of the disease.<sup>3,4</sup> Nearly 80% of HCV infected patients fail to clear the virus and 60% progress into chronic hepatitis.<sup>5,6</sup> The disease natural history is that 20-30% of the infected patients will develop cirrhosis and its sequelae.<sup>7-9</sup> In North America, Europe, and Australia infection with HCV is the leading cause of the chronic liver disease and the most common indication for liver transplantation.<sup>10</sup>

The underlying mechanism for viral persistence is unknown. HCV is an RNA virus that does not integrate into host genome.<sup>11</sup> Its high spontaneous mutation rate is believed to be the main factor for the high chronic infection rate.<sup>12</sup> With the high mutation rate, the virus has the ability to escape immunologic surveillance. It has also been hypothesized that HCV can escape immune clearance by down-regulating its replication in response to the host immune response while persisting quiescently in the liver.<sup>13</sup> Additionally, HCV appears to exist simultaneously within an individual as a series of related, but immunologically distinct variants called quasispecies.<sup>13</sup> The existence of these quasispecies may provide a mechanism by which the virus can escape the host response.

Interferons, a family of cytokines, are the only available therapy for chronic HCV infection. The interferons, as a class, have some antiviral properties, although they possess greater usefulness as immunomodulators. Typically, about 50% of HCV infected patients respond to a 24- to 48-week initial IFN treat-

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## Utilizing Daily Interferon (Alpha 2b) and Ribavirin Combination Therapy

Table 1.

|                                    | Number of Patients | Percentage (%) |
|------------------------------------|--------------------|----------------|
| Ribavirin dose reduction           | 12                 | 48             |
| Non-compliant                      | 4                  | 16             |
| HCV-RNA negativity at 12th week    | 12                 | 57             |
| HCV-RNA positivity at 12th week    | 9                  | 43             |
| Response of relapsers              | 9/10               | 90             |
| Response of earlier non-responders | 3/11               | 27             |

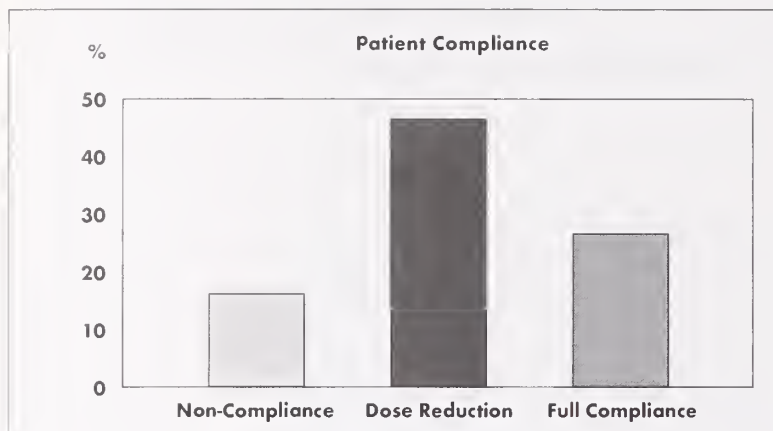


Figure 1. Patient Compliance

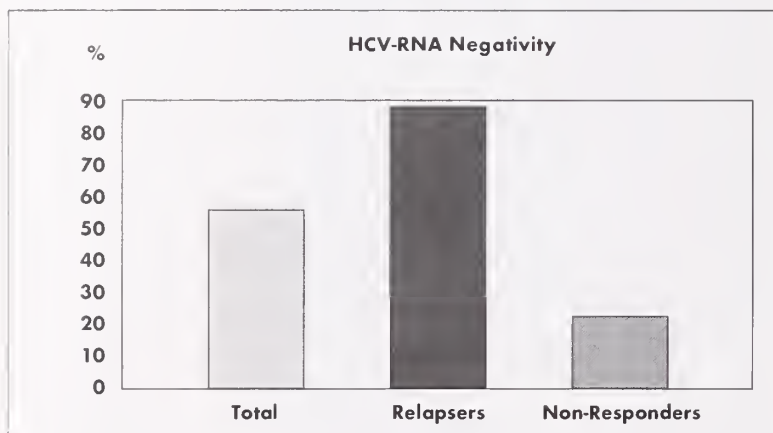


Figure 2. HCV-RNA Negativity

ment, yet one half to two thirds of these responders relapse within six months of discontinuation of therapy. A sustained biochemical and virological response only occurs in 15-20% of treated patients.<sup>14,15</sup> Although, longer duration of interferon monotherapy has been shown to improve the sustained response rate,<sup>16,17</sup> that difference is not great.

Ribavirin is a synthetic guanosine nucleotide analogue with in-vitro antiviral activity against a range of RNA and DNA viruses.<sup>18,19</sup> Ribavirin monotherapy has been shown to decrease the serum transaminase levels and improve hepatic

histology, but has no effect on serum HCV-RNA concentrations.<sup>20-22</sup> Combining ribavirin with interferon has been reported to increase the sustained virological response rate.<sup>23,24</sup> Ribavirin has been postulated to inhibit viral-dependent RNA polymerase, the capping structure of viral messenger RNA, and also inosine monophosphate dehydrogenase.<sup>18</sup> Other immunomodulatory actions may also contribute to the drug's beneficial effects.<sup>19</sup>

The optimal dose, frequency, and duration of interferon alpha 2b and ribavirin combination for the treatment of chronic hepatitis C are still not clear. Preliminary hepatitis C virus kinetic studies and clinical application have suggested that daily IFN is more advantageous than three times a week (TIW) administration.<sup>25-26</sup> Reports have indicated that the majority of the sustained responders have achieved viral negativity by the end of the 12th week of treatment.<sup>27-30</sup> An investigative protocol to evaluate the efficacy of long-term (12 month), daily IFN alpha 2b and ribavirin combination therapy for chronic hepatitis C patients, who have either relapsed or not responded to previous IFN therapy, was developed. This report documents the preliminary results of daily use of the combination therapy, utilizing viral clearance rates at the end of the 12th week.

### Methods

From September 1997 to March 1998, 25 non-cirrhotic HCV patients, with mean age of  $44.0 \pm 6.9$  years were enrolled in an attempt to treat protocol. The patient cohort included 12 female and 13 male patients. Twelve of these patients were relapsers, and 13 of them were non-responders to previously administered interferon alpha 2b. Patients were administered 3MU IFN alpha 2b SQ and ribavirin 1000-1200 mg PO, based on body weight, on a daily basis. Baseline serum HCV-RNA levels were determined prior to initiation of the treatment. Serum samples were drawn weekly for the first month and then monthly for serum chemistry panels, liver function tests, and complete blood count. Serum HCV-RNA was tested again at the end of the 12th week of treatment. Treatment failures were described as HCV-RNA positivity. These results were used to examine the efficacy of this new treatment protocol and to see if there was any difference among previous non-responders and relapsers.

All patients had also a baseline percutaneous liver biopsy performed under ultrasound guidance prior to initiation of the treatment.

## Results

Twelve of the total 25 patients (43%) needed dose reduction of ribavirin mainly due to anemia, severe fatigue and rash. Four patients were removed from the protocol because of noncompliance (Fig 1). The remaining 21 patients (10 relapsers, 11 non-responders) were evaluated at the end of their 12th week of treatment (Table 1). Twelve patients (57%) became HCV-RNA negative and nine patients (43%) remain positive at the end of this period (Fig 2). It is of note that nine of 10 (90%) previous relapsers responded appropriately. For those who have not previously responded to IFN- $\alpha$ -2b treatment, HCV-RNA clearance rate was 27% (3 out of 11). (Fig. 2)

## Discussion

Chronic hepatitis secondary to HCV eventually progresses to cirrhosis in 20-30% of patients. The rate of progress from hepatitis to cirrhosis is approximately 1-4% per year.<sup>8</sup> When the cirrhosis becomes evident, the response rate to interferon treatment is considerably reduced. Patients require treatment to reduce the risk of progression to cirrhosis. Interferon treatment improves almost 20% of the patients, who are able to achieve a sustained response.<sup>14</sup> The question remains, what about those patients who are not responders to initial standard treatment or who relapse after initial response? The treatment options are limited. Further treatment with the same dose of interferon for longer duration or the initiation of combination therapy utilizing interferon and ribavirin seem to be reasonable approaches. Alfa interferon retreatment in prior non-responders was found to be ineffective, with Alberti et al reporting only a 1-2% sustained response rate in this group of patients.<sup>31</sup> Results for relapsers, followed for one year of retreatment, are reported to have sustained response rates in the range of 0-53%.<sup>32-35</sup>

When compared with standard therapy, the combination of interferon  $\alpha$ 2b and ribavirin doubles the response rate for all measures of efficacy, virology, alanine aminotransferase, and histology in patients with chronic infection with HCV who have not previously been treated.<sup>36</sup> A very significant effect of the interferon/ribavirin combination has also been recently observed in relapsing patients both on virological and histological endpoints.<sup>37</sup>

The optimal dose, duration, and frequency of interferon and ribavirin treatment is not clear. Preliminary hepatitis C virus kinetic studies have suggested that daily IFN is more advanta-

geous than treatment three times a week (TIW) administration. Our data shows that a meaningful viral clearance rate can be achieved by the daily use of combination therapy of interferon and ribavirin in patients who are non-responders to prior treatment or relapsers.

Using ALT to monitor patient response to interferon treatment appears to be unreliable, because many responders, with normal ALT measurements, prove to have detectable HCV RNA and subsequently relapse after treatment is discontinued.<sup>38,39</sup> Additionally, serial ALT measurements do not accurately predict histologic improvement during or after therapy.<sup>5</sup>

Serum HCV-RNA concentration is a better indicator of viral eradication than serum ALT values.<sup>38,40</sup> Reports have indicated that the majority of the sustained responders achieved viral negativity by the end of the 12th week of the treatment.<sup>41-44</sup> It has been observed that a 24-week sustained virological response is generally confirmed at 48 weeks as well.<sup>19,30,45</sup> Early viral clearance is a strong indicator of sustained response. Viral clearance rate at 12 weeks continues to be an excellent marker for evaluating the HCV infected patients.

HCV RNA clearance rate was much higher in patients who had relapsed after initial response, when compared to those who had not responded to initial interferon therapy. Results of the other studies have confirmed a higher clearance rate in relapsers, when compared to non-responders.<sup>37</sup>

An important finding of this study is that 27% of viral clearance was achieved in prior non-responders group. In comparison with very low rate response in previous studies, these findings suggest a substantial difference when combination interferon/ribavirin is used. It continues to be unclear as to whether this early viral clearance rate is due to the dose and daily application of interferon/ribavirin.

Some viral factors, such as HCV-RNA titer and HCV genotype, as well as the host factors such as age and presence of cirrhosis, may effect the response rate to interferon treatment.<sup>33-35</sup> Because of the inclusion criteria, this study contained no patients with cirrhosis. Furthermore, evaluation of genotype was not included in the evaluation of HCV patients.

The side effects associated with combination treatment were comparable to what has been reported previously for single interferon alfa treatments, including flu-like symptoms and anemia.<sup>46,47</sup> Four patients (16%) were removed from the protocol because of noncompliance.

Twelve patients (43%) needed dose reduction of ribavirin mainly due to anemia, severe fatigue and rash. These findings are in accordance with other combination therapy reports.

## Conclusion

Although further studies on larger patient populations are necessary, our preliminary data suggests that daily interferon alpha 2b and ribavirin treatment is highly effective, especially among hepatitis C infected patients who have relapsed from previous interferon treatment. Even those patients who have not previously responded to IFN therapy might be considered reasonable candidates for combination therapy that utilizes interferon and ribavirin.

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# THE CONNECTED CLINICIAN

## A Day in the Life of the Connected Clinician

J. Michael Pontious, MD

*(Editor's Note: Chris Candler, MD, is taking a sabbatical from this month's "Connected Clinician." The excuse he gave the editor was something about awaiting the arrival of his first born...)*

A lot of my colleagues know of my penchant for utilizing the computer on a daily basis while practicing medicine. Dr. Candler's discussions to this point have been on a theoretical basis. Since he has allowed me to write this month's article, I am going to take a bit different tact and walk you through a day in my life in which I use my computer and internet links.

Rounds start the day. I recently invested in a PalmPilot™ computer, in which I have stored all of my addresses and phone numbers. I have become quite dependent on this piece of hardware. As the name would imply, it fits in my palm, or in a leather holster that I wear on my belt. I take a fair amount of teasing from my colleagues in the hospital, as they remind me that this contraption hanging off of my belt looks a bit "nerdy" and that I will be wearing tape on my glasses before long. I just grin at them and tell them that patients think I am quite an educated fellow.

My inpatients are listed on a program that was easily written in HandBase version 2.0 (<http://www.ddhsoftware.com>). This program allows me to track the hospital to which the patient is admitted, the room number, and the diagnosis. It also allows me to choose what level of care I provided and what procedure I did. This seems to work much better for me than those pieces of paper I used to carry in my pocket. At the end of the week, I beam (using the infrared port on the PalmPilot™) a list of my charges and procedures, along with the linked diagnosis, to the secretary who prepares my billing.

In an effort to get my Evaluation and Management coding done correctly, I found another program on the internet called STAT

E&M Coder™ (<http://www.statcoder.com>). This program allows me to tell the PalmPilot™ where I saw the patient; it will ask me what type of exam I did, what intervention I performed, and how complicated the visit turned out to be. Once this is completed, the PalmPilot™ tells me what level of code I should use. I don't do this for each visit, but when confronted with something "off of the beaten path," it helps me do a better job of keeping the HCFA fraud unit out of my office. Using it for a short time has made the coding nightmare much easier to tolerate and understand.

Once I arrive in the office, I am confronted with patients who do not always fit the "classical" presentation. Practicing primary care for 20 years has taught me a few things, but I find that I run into questions, on a daily basis, for which I do not have full answers. I also worry that I am going to miss the newest approach for the variety of diseases that I manage. I have a computer in the clinic library that gives me access to the Internet. I have developed a system by which I can be connected continuously. My medical homepage has the links that I use frequently (<http://www.fammed.ouhsc.edu/enid/enid.htm>). From this page I can do a quick Medline search using PubMed (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>). This link is an extremely useful access to realms of information about the kinds of things that I used to write down and look up when I was at the medical library. There is a service (Lonesome Doc) that is available from our local hospital which allows me to ask for a copy of any article that I find on Medline. It is delivered in the mail the next day. This is so much more efficient than the "old days" when I would beg my medical students to call the library at the medical school and obtain an article that I wanted to read.

Patients need decent medical information as well, and I am not known for always being able to

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keep my handouts updated. I have found a couple of sites that can be accessed and information printed to give to the patient. I am confident of its content and patients seem to appreciate having something to review. The American Academy of Family Practice has 200 patient education titles (<http://familydoctor.org/>) and Laurus© (<http://www.laurus.com/>) has many more. If I have a moment, I can access these while the patient is in the office, and print them out; if not, I wait until I dictate and print it out, and mail it to the patient. It works fairly well. Patients like it.

E-mail review allows me to communicate with the folks that I need to contact. I like it because it is done when I have a moment and I avoid the difficulties with playing "telephone tag" and the "leaving message" game. Connected patients are able to ask their questions without slowing down my day, and many of them have found that, compared to the telephone, I give better answers through e-mail. It works well for established patients. If lab tests need to be ordered, I e-mail them and they take a copy of the e-mail to the lab, which then serves as my lab order. I will be glad when the pharmacy will allow me to e-mail my prescription refills.

Toward the end of clinic, as I sit and dictate my notes, I continue to be frustrated about the inefficiency of the system that we have developed for medical records. The nurse checks in the patient, writing down the vital signs and the presenting complaint. I come in and take the history, conduct the relevant examination, decide what I want to order in the way of lab or x-ray, or decide what medication I want to prescribe. I write the prescription(s)...and the handwriting is getting worse as I age. Then I sit down and dictate a note, making sure that I put in all of the critical elements of that visit. I send the tape to my secretary who listens to it, types it on the paper, and sends it back to me for review. I dream of the day when I can talk into my handset and the voice recognition software on my computer will take my words and type them into the electronic medical record, which stores this record and reminds me of the lab and preventive measures that need to be undertaken on the next clinical visit.

I am pretty sure this is where we are going in the next decade. For some, it will be painful; for others, we will ask ourselves why it took so long to become connected clinicians. □

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# WORTH REPEATING

*The following article by Perry A. Lambird, MD, MBA, is reprinted in part from the original commentary, which first appeared in the March 1994 supplement to the Journal of the Oklahoma State Medical Association.*

## **The AMA—Physician Membership and Representation**

Perry A. Lambird, MD, MBA

**“T**he AMA doesn’t represent me.” Really? In traveling throughout Oklahoma, it is clear that two issues are stimulating much conversation among physicians. [including] the non-discriminatory nature of AMA membership. Some current AMA policy represents decades of discussion and debate. Perhaps a review of those issues from someone who has actually been there might shed some light on obviously murky misperceptions, for they bear directly upon...membership and physician representation.

### **Membership**

To be blunt, membership is power.

Within the AMA, and by virtue of our unified membership, we have, and have used, delegation strength to establish reams of AMA policy. We have more delegates than Alabama, Indiana, Iowa, Maryland, Minnesota, Washington, Wisconsin, and many others. We have as many as Missouri, Virginia, and Tennessee. Yet these states are much larger than we. We cannot win all battles. But we have won almost all in which we have been engaged. Oklahoma is elegantly represented.

Nationally, in Congress and before regulatory agencies, membership is also power. Everyone who declines to join weakens our power incrementally. This weakness has been exploited by President Clinton, who has attacked AMA opposition to his bureaucracy-laden plans by stating that the AMA does not represent physicians. It is impossible with our current media to insert the appropriate “yes, buts...”

Speaking of membership, my desk, like yours, has been littered lately with letters from the misinformed concerning AMA “endorsement” of homosexual lifestyles. Perhaps some facts might be of interest.

First, the AMA, from personal observation over the last two decades, has never discriminated against anyone. The only effective qualifications for membership are to be an ethical physician or medical student and to pay dues. The AMA House is a complete microcosm of American physicians.

Second, the AMA does not “endorse” any lifestyle. Because of the public health implications of smoking, seat belts, and numerous other issues, it does address “social” issues, often heatedly and with protracted debate.

Third, the debate about amending the bylaws to prohibit discrimination in AMA membership on the basis of sexual orientation was not about endorsing lifestyles but about how best to express the fact that the association has never discriminated in the first place! My personal view was that the time had come to end a “laundry list” approach (race, sex, national origin, etc), since even our relatively small Board of Trustees includes whites, blacks, men, women, international medical graduates, and so forth. The Council on Constitution and Bylaws, however, had not utilized that approach, so it was not an option for the House. The practical alternative was to spend hours in the House debating what was in fact a non-issue or using the time of the House to debate another topic—AMA policy toward health system reform.

Fourth, all of us tend to forget that we do not like democracy when we are in the minority. The AMA House may well be the most democratic organization that exists in the world today. Every six months it addresses hundreds of issues—each needing only one sponsor. Every member of the association, all 300,000 of us, can speak essentially without limit at any reference committee meeting. The reference committees are charged

with preparing business for the House along the lines of the testimony received by them. In the case of the bylaws, the House adopted the recommendation of the reference committee.

Fifth, membership in an organization does carry some responsibilities beyond merely paying dues. The great bulk of the business before each meeting of the AMA is published in synopsis form in *AM News* and is delivered to the preferred mailing address of every member in the weeks preceding the meeting. This gives each member an opportunity to talk with a delegation member concerning any issue, as well as the opportunity to attend the meeting and express his or her own views personally.

In short, members count, members control the AMA, and without AMA membership, American medicine is finished.

### **Representation**

It is also useful to consider the alternatives to the AMA for political representation.

A unified voice pays dividends; a divided voice exacts penalties. In Canada, all the provinces but Quebec negotiate fees with the provincial medical society. In Quebec, negotiations are with two different medical groups. Is it a surprise that fees in Quebec are far below those in the other provinces?

Some believe, mistakenly, that the specialty societies could replace the AMA. Look at two illustrations, however.

Which of the following specialty societies should we choose to represent us on health system reform?

1. The American College of Surgeons which has endorsed the single payor system?
2. The American College of Physicians which has endorsed the entire Clinton proposal?

3. The American Society of Internal Medicine or the American Academy of Family Physicians, both of which have endorsed an employer mandate to the exclusion of all other options?

The AMA is faced not only with the difficulty of achieving its policy goals in the face of presidential opposition, but also must contend with the dissonance created by specialty groups pursuing different policy goals but purporting to speak for "physicians." The burden is very heavy.

Second, our specialty organizations are often disingenuously self-serving. I have seen specialty groups trumpet a "win" to their members when, in fact, it was the AMA that served up the victory. I have seen specialty groups decide to "support" 34 items but leave 32 of them to the AMA alone to do the grunt work of getting them adopted. The AMA carries a huge load without effective support while the involved specialty groups devote their energies to a narrow and comfortable issue. Support is withheld when it is due and credit taken when not deserved.

In truth, if we were to dissolve the AMA, we would have to reinstitute it tomorrow. There simply is no alternative.

### **Conclusion**

Change is upon us, as physicians, as patients, and as Americans. We have a simple choice. We can increase our OSMA and AMA membership activity and PAC contributions and attempt to serve up an honorable victory. Or we can withdraw our membership, decrease our involvement, and accept an ignominious defeat. The choice is ours. □

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# Special Holiday Memories

## A Christmas Lifeline

Neal Clemenson, MD

"I can't see," came the plaintive cry from Francis' bedroom. My wife and I had arrived at her parents' home for Christmas just a few hours earlier, and her father had retired for a nap. This didn't sound like the Fran I knew, who had been exceptionally healthy throughout his 64 years, so I hurried to his bedroom wondering what to expect.

Fran lay on his bed, as pale as a ghost. "Could you take my boots off?" he asked, but as a physician I had other priorities. As I felt his rapid, thready pulse I shouted for my mother-in-law to call for an ambulance. He's in shock, but why? Where could he be bleeding? I could handle this in the ER, but here I have nothing—not even a stethoscope.

My family watches, assuming I have everything under control, but I have a different, unfamiliar feeling—helplessness. Seconds feel like hours—where's the ambulance? I do what little I can: I take his boots off and elevate his legs.

Finally help arrives, but in Michigan the first responders are

EMTs. As they check his blood pressure (70 over zip) and try to start a peripheral IV, I explain to them that I am a physician and that this guy needs a central line, and he needs it now! They radio for the paramedic—he'll be here soon!

More waiting, more helplessness.

"Do you have a central catheter?" I ask. "I don't think so," an EMT responds as he hands me the box to check for myself. I dig around and there it is—a 16 gauge, 12 inch Intracath.

Seconds tick by....

I quickly run an alcohol swab under his clavicle and decide there's no time to look for local anesthetic. "Fran, this is going to hurt!" I say as I jam the thick needle in and ease it toward his subclavian vein, praying for blood return. It comes, the IV bag is attached, the fluid pours in.

About 500 cc's later the paramedic arrives, we load him into the ambulance, and we're off. The paramedic seems relieved that I'm there, but I'm scared to death. I stare

at the monitor, watching each beat, hoping the rate slows, hoping it stays sinus, hoping we're going to a hospital with a good ER doc and a surgeon close by.

Yes, yes, yes. We arrive, and he's looking better, his second liter of IV fluid in. The abdominal series suggests an aortic aneurysm, and he's in surgery minutes later. "He's going to be fine, isn't he?" my wife and her mother ask. I nod, trying to forget the odds for ruptured aortic aneurysms—a 50/50 chance, even if they make it to surgery. An hour goes by, then word from the OR—he's holding his own! A couple more hours, and we get to see him, monitors and tubes everywhere, but his color's back, he's alive!

We celebrate Christmas in the hospital, feeling like we've been given a wonderful Christmas gift.

A slow but full recovery, and Fran—husband, father, future grandfather—is back home. And now, 15 years later, each Christmas we share has special meaning, as we all look forward to the next.

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## My Most Memorable Christmas

Howard F. Stein, PhD

Christmas Eve, 1962. My parents and I returned from an annual rite of taking the decorated Christmas tree from my father's women's wear store and giving it to an old family friend who lived out in the country. If the religion was theirs, the spirit was also ours. My father left my mother and me off at the door of our apartment building in downtown Coraopolis, Pennsylvania, a factory town. We were among its few Conservative Jewish families.

In eager anticipation, I leapt up all twenty-four stairs to the first landing. My maternal grandfather lived in Apartment 1, and we lived across the hall in Apartment 3.

I spent as much time as I could in #1. At fifteen, I had long possessed my own key to his apartment. Before going to bed, I would always go "next door" and kiss him good night.

At eighty-one, he was the loud-speaking Jewish Czar who ruled a single piece of real estate—six apartments and two storerooms, one of which housed my father's store. One of eighteen children, he immigrated to America from Russia when he was ten or so. He began his American sojourn as a rag picker. He helped the family get established, then sent for his parents. He was strong; I borrowed much of my strength from him.

I walked in and looked to the right toward the end of the hallway. The door to the bathroom was open—not unusual for him. I am not sure what I "saw," for bearing to see is part of seeing. I called out to him and ran down the old, purple carpet to the bathroom. I found him half-naked, fallen over the toilet on which he had been seated. The right side of his face rested on a hot steam pipe that fed the radiator. I called again to him, tried to shake him. I tried to lift him alone, but his body would not budge. I do not remember when I decided that he was dead, but it did not take long.

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## Wisp of Christmas Past

Ray V. McIntyre, MD

In the bleak Appennine mountains of southern Italy in December of 1943, the Allied armies of World War II were deadlocked on the mountainsides with an entrenched and fanatic German army. At the zenith of mankind's bloodiest war, American soldiers were struggling up the bare slopes of the mountain massif made notorious by the Battle of Cassino.

My 179<sup>th</sup> Infantry regiment had slowly ratcheted itself up on the southeastern slope of the mountain when Christmas time of 1943 rolled around. Most of our regiment's troops were precariously dug in on the rocky sides of the steeply sloping ravines. Daily machinegun and artillery duels for control of the sheltering ravines occurred. Every night, infantry patrols clashed while probing for weak spots in the other side's defenses, and the night air became filled with flying bullets.

I was present during this Yuletide fracas to operate a mobile field radiotelegraph station that sent encoded reports to, and received orders from, the General at headquarters. Compared to the unsheltered foot soldiers around us, my radio crewmen and I were in clover, for we were able to shelter in a stone stable tucked closely under a

rock escarpment. The only animals remaining in the stable were the resident mice, the stone walls kept out most of the wind and snow, and the cliff protected us from German shells and bullets.

The weather was bleak and cold, and snow or sleet fell nearly every day. Our trail to the "outside world" behind the fighting front was an ancient wagon road, actually a cart path, that was used as a track for jeeps that brought in ammunition, water, and field rations. This cart track was under direct enemy observation, and thus any movement along the path might bring forth a barrage of cannon fire.

We tried to keep warm, and we spent our time wondering and worrying about the next enemy artillery barrage and whether there would be any rations for the next meal. The usual field ration at that time was the "K" ration, and it was small, compact, easily portable, and tasteless. Also, it was too skimpy to maintain the caloric balance of an infantryman engaged in digging foxholes and running up and down a mountain. We felt hungry all the time.

Up on the mountain near Cassino at Christmastime, we found it hard to keep cheerful. We knew we faced a Christmas Day in battle on

the front line, with no opportunity to recognize the significance of the season. We soldiers became painfully aware that our human need to re-experience the joy of Christmas renewal could not be filled.

Christmas morning on the Italian mountain in 1943 was dull gray and cold, and it snowed intermittently through the day. Shortly before noon, however, here came a little truck up that bullet-riddled zig-zag trail. Our company cooks down at the foot of the mountain had made a Christmas dinner of turkey, dressing, gravy, cranberry sauce, and even a dessert. Although it was barely lukewarm on arrival, eating that good turkey dinner in our snow-covered stable fulfilled in me much more than my need for my daily bread.

Our fellow soldiers in the company kitchen had gone to a lot of trouble, extra work, and even some personal danger to bring a good meal to the fire zone. They were recognizing the special mood of Christmas in the only way available to them amid the stringencies of war. They were not "just doing their job." They were sharing the joy of Christmas in an extraordinarily difficult event. My appreciation persists.

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I turned and bolted down the hall to the door and ran onto the landing to tell my mother who had just climbed the stairs. A few minutes later I ran down the stairs to try to find my father. He was putting the car away in a garage a few blocks away. When I told him that grandpa was dead, his face was as much stone as my mother's.

What was to be done, we asked each other in hollow speech. I had never been much of a family "executive" in my early years. As if "instinctively" had meaning, I walked over to the black rotary telephone in my grandfather's dining

room—the table still full of dinner's dishes—sat down in the chair, and called the chief of police and my grandfather's doctor.

I first apologized for disturbing them on Christmas Eve, but I thought my grandfather was dead and that before we made funeral "arrangements," I should call them. Each eventually showed up. They both ruled that Oscar Finn had died from natural causes: the "heart condition" from which he had suffered for decades. I even knew which funeral home in Pittsburgh to call. I remembered the name from earlier family funerals. It is amazing what all, and

how much, one "knows" without ever consciously knowing it until it must be summoned from the reserves into active duty.

There were dinner dishes to wash, and a table to clean off. There was an apartment filled with a lifetime now departed. Absence never occupied so much space.

This year, the night of the rebirth of the world was also a dark night of the soul. If we all die alone, still, none should die alone. I have come to believe that there are things in life we should not see, or that we are forever unprepared to see...least of all on Christmas Eve.

## Red Dolls

*Rhonda Sparks, MD*

My schedule as Chief Resident on the inpatient Family Medicine service wouldn't allow me to be with my family in Indiana during the holiday season. I had arranged the schedule to give each of the residents on the team a bit of time with family and friends. My protected time was during Christmas Eve.

I was on my way out the door, to spend the evening with friends (my Oklahoma family), when my pager went off. Jessica, whom I had delivered five months earlier, was being admitted to Children's Hospital with fever, tachypnea and wheezing. I have come to realize that there are two things on which you can always count during the holiday season: hectic schedules and RSV.

Jessica's young mother and protective grandmother were very anxious about the illness and were asking to see me. The resident on call had attempted several times to calm the mother and explain the rationale behind our conservative therapy for the viral illness. Their persistence prompted my fellow resident to page me.

"Rhonda, this family really wants you to see this child."

I admit my initial response was a silent, somewhat disgruntled shake of my head and a decision to

continue with my planned evening, but I opted instead for a quick stop at the hospital on the way.

On my way through the maze of "towers" at Children's Hospital, I came across an elderly couple, obviously lost in this massive complex of buildings called the Health Sciences Center. I paused to offer directions and found that they only had a general idea of where they were headed. They wanted to go to "where the sick children were." I asked if they had a grandchild in the hospital. They responded "no" in unison and paused as they looked at each other.

I responded with a perplexed look.

They proceeded to explain that they had two dolls which they wanted to give to kids who otherwise "wouldn't get anything this Christmas." The woman then opened the brown paper bag and proudly showed me the two red dolls which they hoped to share. I grinned as I recognized that season's most rare toy—two prized and bitterly-fought-for "Tickle Me Elmo" dolls.

I joked with the couple that we should call security to escort them to the third floor to deliver these precious gifts, as there were still people searching frantically for one of these dolls to place under the tree

for Christmas morning.

I directed them to the toddler unit and informed a nurse of their "red doll mission." I smiled as I walked to the infant unit to see small Jessica. I spent a small amount of time examining Jessica and more importantly reassuring mom and grandma. I left knowing that I had made Christmas Eve a little easier for Jessica's family this year.

The lesson of love and giving that I had experienced was payment-in-full for that late evening hospital visit.

The lesson of that evening is still very clear in my mind. While giving is one "reason for the season," what became clear to me was that the joy of giving is multiplied many fold if we focus on those in need. The elderly couple wasn't taking these treasures to their grandchild that Christmas. They were giving to a child in need. My focus that evening was on giving to my friends, yet the small amount of time I took to spend with Jessica and her family was so much more valuable, in the larger scheme of things.

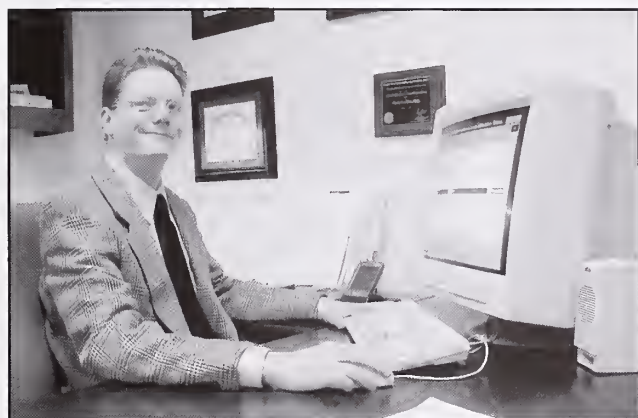
I learned a lesson of true giving—a lesson I will make a part of each holiday season. Give freely and remember those in need as you share this holiday season with your loved ones.



*Happy Holidays...  
from the OSMJA Journal*

## Candler Honored by Oklahoma State Regents for Higher Education

The University of Oklahoma College of Medicine's interactive Web site, the Hippocrates Project, is one of the largest noncommercial Web sites in the world devoted exclusively to medical education.



The Oklahoma State Regents for Higher Education recently honored the project's creator, Chris Candler, MD, with an Instructional Technology Excellence Award. Dr. Candler is a 1996 College of Medicine graduate and a regular contributor to the *Journal's* "Connected Clinician" articles, which describe how technology may assist Oklahoma physicians.

The Hippocrates Project, named for the Greek physician considered the founder of modern medicine, averages 100,000 hits a week. The interactive, password-protected Web site currently has more than 25,000 images, animations and videos. It also contains many syllabi for the college's basic science courses and links to helpful search engines and medical reference sites.

*Chris Candler, MD*

## OU College of Public Health Excellence Awards Dinner Recognizes Outstanding Contributions to Public Health

Six individuals and three organizations were honored at the fourth annual Public Health Excellence Awards Dinner on Oct. 22, sponsored by the College of Public Health at the University of Oklahoma.

Of the six, two were OSMA members—Virgil Matthews, MD, of Muskogee, and Alicia Vanhooser, MD, of Enid. Dr. Matthews was given the Professional Individual Award for his efforts to bring health care to the county's medically underserved. He was instrumental in bringing health clinics into the County Health Department.

Dr. Vanhooser was given the Public Health Advocate Award for her advocacy efforts on behalf of women's health care issues.

Other recipients include Averil D. "Cookie" Arbuckles, Volunteer Individual Award; Kimberly Cravatt, Student Award; Willie V. Bryan, Academic Professional Award; First Lady Cathy Keating, Special Achievement Award; Smokeless Oklahoma Project in Kay County, Program by Community Group Award; Okla-



(l-r): Debbie Clark, Oklahoma Breast Care Center; Virgil Matthews, MD; Janet White, Smokeless Oklahoma Project; Willie V. Bryan, Ed.D.; Presenter Mary Jane Calvey, MPH; Presenter Anthony Lee, MPH; Presenter Mike Crutcher, MD, MPH; Kimberly Cravatt; Alicia Vanhooser, MD; Jan Kunze, OG+E; Presenter Everett Rhoades, MD; Cookie Arbuckle; and Jan Litherland, Oklahoma Breast Cancer Center

homa Breast Care Center, Program by Corporation Award; and Oklahoma Gas & Electric, Dan J. Macer Environmental Award.

## Glasgow and Medina Appointed as Cancer Liaison Physicians

James A. Glasgow, MD, of Ada, and Jesus E. Medina, MD, of Oklahoma City, have been appointed to serve as cancer liaison physicians for Hospital Care Programs at local hospitals as part of the Commission on Cancer of the American College of Surgeons. This liaison position includes having the physicians provide leadership to the cancer committee at their appointed institution in order to maintain their Commission-approved cancer program or assist them in seeking approval as a new program.

Dr. Glasgow will work for the program at Valley View Regional Hospital in Ada; Dr. Medina will work with University Health Partners in Oklahoma City.

Established in 1922, the Commission on Cancer, which is composed of fellows of the College and liaison members representing more than 37 other cancer-related organizations, has approved more than 1,480 cancer programs in institutions across the country.

The Commission reviews each institution's cancer program for conformity to established standards and encourages participating hospitals to equip and staff themselves so they are able to provide their patients with the best in the diagnosis and treatment of cancer.



*Jesus E. Medina, MD*

## Anti-Tobacco Campaign Receives National Award

The Oklahoma Project on Women & Girls, Tobacco & Lung Cancer, under the leadership of Mary Anne McCaffree, MD, was recently named a recipient of the 1999 Governor's Community Service Award from the Chest Foundation, the philanthropic arm of the American College of Chest Physicians (ACCP).

Dr. McCaffree received the award, along with a check for \$2,500 payable to the OSMA Foundation, at a ceremony in Chicago recently. She also made a presentation on the project at the ACCP's Women's Network luncheon at which Maggie Daley, president of the Pathways Awareness Foundation and wife of Chicago Mayor Richard M. Daley, was featured guest speaker.

The Oklahoma Project on Women & Girls, Tobacco & Lung Cancer has three goals:

- 1) to educate physicians about effective, evidence-based smoking prevention and cessation strategies;
- 2) to advise and educate girls and women about the negative health effects of tobacco use; and
- 3) to collaborate with existing anti-tobacco coalitions to advocate for financial support for project programs.

One of the program's pilot projects now underway in Tulsa consists of a partnership between the Tulsa Public Schools and the Tulsa County Medical Society's Women in Medicine Group. In order to help reduce the incidence of tobacco use in girls, the project will pair 13 women physicians with 13 Tulsa middle schools over a two-year period to mentor 3,000 girls. Some of the activities associated with this project



*Mary Anne McCaffree, MD*

include biannual presentations, creating a play to be given at all 13 middle schools that is being written, directed, and performed by female high school students from Holland Hall High School, and a poster contest with the winning entry displayed on billboards around Tulsa. For more information about the Oklahoma Project on Women & Girls, Tobacco & Lung Cancer, contact Joy Leuthard, OSMA's Director of Health Care Policy & Research, at 405/843-9571 or 1-800-522-9452.

## OBITUARIES



### **George B. Carter, MD**

**1931-1999**

George B. Carter, MD, died October 7, 1999. He was born July 29, 1931 in Pine Bluff, Arkansas, and attended both the University of Oklahoma and the University of Arkansas. Dr. Carter received his medical degree from the University of Arkansas College of Medicine in 1956. For two years, Dr. Carter served as a Captain in the U.S. Army. Dr. Carter was a life member of the Oklahoma State Medical Association.



### **Theodore Turnbull, MD**

**1919-1999**

Theodore Turnbull, MD, died October 19, 1999. Born April 4, 1919 in Kewanee, Illinois, Dr. Turnbull received his medical degree from Northwestern University Medical School in 1945. Dr. Turnbull was a life member of the Oklahoma State Medical Association.



### **Sol Wilner, MD**

**1913-1999**

Sol Wilner, MD, died October 31, 1999. Dr. Wilner was born November 5, 1913, in New York City. He received his medical degree from the University of Maryland School of Medicine in 1939. From 1942 to 1946, Dr. Wilner served in the U.S. Army, including 29 months overseas during World War II, and achieved the rank of Major. Dr. Wilner was a life member of the Oklahoma State Medical Association.

## IN MEMORIAM

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Joseph N. Mitchell, MD ..... December 23

**1999**

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H. Ben Yagol, MD ..... January 19  
Paul Elliot Tietze, MD ..... January 27  
Fay Knickerbocker, MD ..... February 6  
Charles L. Johnson, Jr., MD ..... February 8  
Ramon G. Blanco, MD ..... March 5  
Neal A. Pickett, Jr., MD ..... March 14  
Henry D. Wolfe, MD ..... March 29  
Winfred L. Medcalf, MD ..... April 1  
Robert P. Dennis, MD ..... April 6  
Emil F. Stratton, MD ..... April 7  
Carl W. Smith, Jr., MD ..... April 8  
George L. Hill, MD ..... April 20  
Jim M. Taylor, MD ..... April 28  
T. Jeff Williams, MD ..... May 17  
Thomas Ross Ahrend, MD ..... May 23  
Lawrence E.C. Joers, MD ..... June 5  
Hyman J. Drell, MD ..... July 15  
Lee Bailey Word, MD ..... July 22  
Dave B. Lhevine, MD ..... July 31  
Michael Allan Houghton, MD ..... August 16  
Webb M. Thompson, Jr., MD ..... August 20  
Perry A. Lambird, MD ..... August 25  
Nolen L. Armstrong, MD ..... September 12  
George R. Randels, MD ..... October 2  
George B. Carter, MD ..... October 7  
Theodore Turnbull, MD ..... October 19  
Sol Wilner, MD ..... October 31

## OFFICE SPACE

3,000 sq. ft. free-standing clinic building, situated on beautifully landscaped 3/4 acre in Norman. This building is contemporary in design, functional in layout and is located on a main thoroughfare in Norman, Oklahoma. It presently has a hospital x-ray department and an in-office lab.

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Claremore is a rapidly growing community with a population of 20,000 located in Rogers County, which has a population of 70,000. Claremore is an ideal place to raise a family! Please phone Ken Seidel, Hospital Administrator at 918-342-6700 or fax your CV to 918-342-3330.

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- If you are a physician interested in doing locum tenens work, please call or fax your CV.

Classified ads are 50 cents a word, with a minimum of \$25 per ad. A word is one or more characters bounded by spaces. Box numbers will be assigned upon request and will add 6 words to the total. *Payment must accompany all submissions.* Orders will NOT be accepted via telephone or fax. Mail ad with payment to OSMA JOURNAL, 601 West Interstate 44 Service Road, Oklahoma City, OK 73118. Deadline is the 9th of the month prior to the month of issue (e.g., June 9 for the July issue).

## TO THE EDITOR:

William H. Yarborough, MD, should be commended for his excellent educational article in the OSMA *Journal*, Vol. 92, No. 10., October 1999. He tackles an important issue that is not often discussed, let alone admitted. Even some medical students and residents have substance abuse problems. His statistics are solemn. They become even more important when one puts a name and face to them.

What better way to enter the "new future" than with a resolve to be more alert in our medical schools and residency programs to help a future physician work through a struggle with substance abuse. This must be done before they get into practice and harm a patient, alienate their family, destroy a career and/or potentially take their own life.

The article presents a good list of steps to take when dealing with a medical student or resident with a possible substance use disorder. The OSMA Physician Recovery Program (PRP), directed by Harold Thiessen, MD, and William O'Melia, MD, is a valuable resource for faculty and directors to utilize for confidential advice or help.

His article should be required reading for every medical student, resident, medical school and residency faculty member (full time & part time).

Lyle Kelsey  
Executive Director  
Oklahoma Medical Board

LETTER TO THE EDITOR  
submissions may be directed to:

J. Michael Pontious, MD  
Editor-in-Chief

via e-mail: michael-pontious@ouhsc.edu

or by mail:  
*Journal*

Oklahoma State Medical Association  
601 W. I-44 Service Road  
Oklahoma City, OK 73118

## TO THE EDITOR:

There is a clock on my desk that was given to me a number of years ago by Perry Lambird. The recent tragedy resulting in the deaths of Perry, Mona Sue, and Jennifer reminded me of the importance of time to the Lambird family and how they exploited it so effectively.

Perry, Mona, and their four daughters were indeed a unique family. Dedicated and committed to a multitude of business, educational and professional activities, they collectively and individually raced against time to attain their objectives. They were happy in their pursuits, challenged by each other and by their colleagues. A prevailing and outstanding characteristic was a commitment of time to each other. They were and are a family.

Perry and I became friends shortly after my employment by the OSMA in the late 1960s. A major issue during the 60s and early 70s was the national debate on the adoption of a universal Health Insurance Program for most Americans. This debate may have created in Perry the aspiration to become a medical politician and a political activist in the Republican Party. He accomplished both. He chaired OSMA's Council on Governmental Affairs and, in 1980, became an AMA Delegate from Oklahoma.

A true conservative, Perry was a supporter of Ronald Reagan, Newt Gingrich, Mickey Edwards, and other Republican Party leaders. But he never forgot the duality of his position. The Oklahoma Congressional delegation was at that time 4-2 Democrat and in the Senate, one of each. His solution: hire a conservative Democrat to represent OSMA in Washington. John Montgomery became a part-time member of the OSMA staff in 1976 and remains as such today. At the beginning of Perry's tenure as chairman of the OSMA Council on Governmental Activities, we could count on only one or two congressional votes on major medical issues. When he stepped down in 1990, we could count on a majority in favor of our position. Perry presented convincing scientific and patient care data that the delegation believed, became comfortable with, and supported.

That same attitude prevailed as he became more active in OMPAC and OSMA's state legislative activities. He advocated a conservative philosophy but supported campaign contributions to Democratic leaders who controlled the Oklahoma legislature. In addition, he urged OSMA members to support with personal funds candidates who advocated a conservative philosophy. The bottom line was that both Democrats and Republicans respected Perry's political acumen.

His success in AMA politics was similar. The ability to understand, appreciate, and articulate to the AMA Board of Trustees and the House of Delegates the complexity of issues before his Council on Medical Services made him a favorite with AMA politicians and the organization's staff.

Unfortunately, his fairness and understanding of both sides of complicated issues and his willingness to support the position of the Council he chaired most likely led to his defeat in a bid for a position on the AMA Board of Trustees and, ultimately, his desire to become AMA President.

During all these activities, it was not unusual to see Perry maximize the time available. He could read books and reports, work crossword puzzles, and still never miss the importance and intricacies of debates in any of the many committees, boards, and deliberative bodies on which he served. Invariably, he would intelligently and cogently respond at the appropriate time with significant fact and candor—even if it interrupted his completion of an important line in his puzzle.

During my tenure as Executive Director of OSMA, I usually advised incoming presidents of the organization to concentrate on a compelling and favorite issue that they would like to accomplish or impact during their first year in office. Perry's list was multiple and his priorities reflect a personality that challenged time:

- We established the first-ever formal liaison with the Oklahoma Bar Association.
- We established a special program to encourage women physicians to accept leadership roles in county, state, and national medical organizations. The program was adopted by the AMA and resulted in the increasing participation of women medical leaders nationwide, leading to the first-ever women presidents at the AMA and state associations—including OSMA.
- A similar program for young physicians was started.
- An aggressive federal legislative program was started to modify the proposed medical office laboratory regulation that was detrimental to practicing physicians' offices. This resulted in thousands of letters being sent to members of Congress.

And there were others.

The years of 1990 and 1991 were busy ones, presenting true challenges to OSMA and its staff. But as we remember back, we recall Perry's commitment to OSMA, his willingness to commit the time necessary to accomplish its objectives, his positive attitude, and his unquenchable love and appreciation for his family, all topped off by his wonderfully loud and infectious laugh.

Perry, we will miss you and Mona Sue and Jennifer, and we send our blessings to Allison, Susanna and Elizabeth.

David Bickham  
Former Executive Director  
Lifetime Member  
Oklahoma State Medical Association



# Oklahoma State Medical Association

## Continuing Medical Education

### OSMA Accredited Institutions:

Deaconess Hospital -  
Oklahoma City

Duncan Regional Hospital -  
Duncan

Hillcrest Medical Center -  
Tulsa

Institute for Mental Health -  
Oklahoma City

Integrus Baptist Medical Center -  
Oklahoma City

Integrus Southwest Medical Center -  
Oklahoma City

Jane Phillips Medical Center -  
Bartlesville

Mercy Health Center -  
Oklahoma City

Norman Regional Hospital -  
Norman

Orthopaedic & Reconstructive  
Research Foundation -  
Oklahoma City

St. Anthony Hospital -  
Oklahoma City

Saint Francis Hospital -  
Tulsa

St. John Medical Center -  
Tulsa

Stillwater Medical Center -  
Stillwater

Valley View Hospital -  
Ada

### Course offerings from OSMA Accredited Institutions

#### Integrus Baptist Medical Center - Donna Schoenfelder - 405-949-3284

|                 |  |        |        |
|-----------------|--|--------|--------|
| Dec. 3,17,21,28 | Tumor Board                                  | 7:00am | 1 hour |
| Dec. 10         | Cancer Conference                            | 7:00am | 1 hour |
| Dec. 10         | Family Practice--"Geriatric Pain Management" | 7:00am | 1 hour |
| Dec. 10         | Medicine Department--"Med. Examiners Cases"  | 7:00am | 1 hour |

#### Irwin Brown Office of Continuing Medical Education-Letricia Harris- 405-271-2350

|        |   |  |         |
|--------|---|--|---------|
| Dec. 3 | Genetics Update for Allied Health Professionals |  | 4 hours |
|--------|---|--|---------|

#### Jane Phillips Medical Center - Ronda Riden - 918-331-1467

|        |   |         |        |
|--------|---|---------|--------|
| Dec. 2 | Evaluation & Treatment: Snoring and Sleep Apnea | 12 noon | 1 hour |
|--------|---|---------|--------|

#### Mercy Health Center- Debbie Stanilla- 405-752-3806

|                   |   |         |           |
|-------------------|---|---------|-----------|
| Dec. 2            | "Hepatitis C"   | 12:15pm | 1 hour    |
| Dec. 9            | "Penicillin Resistant Pneumococci:<br>Evolving Challenge in Antibiotic Therapy" | 12:15pm | 1 hour    |
| Dec. 15           | Ethics for Lunch  | 12noon  | 1 hour    |
| Dec. 16           | "History of Medicine"   | 12:15pm | 1 hour    |
| Dec. 1,8,15,22,29 | Tumor Board   | 7:00am  | 1 hr. ea. |
| Dec. 21           | NeuroScience Institute Conf. Ctr. Lecture Series                                | 7:00am  | 1 hour    |

#### Norman Regional Hospital - Joyce Nolen - 405-307-1398

|        |                      |         |        |
|--------|----------------------|---------|--------|
| Dec. 2 | "G.E.R.D."           | 12:15pm | 1 hour |
| Dec. 7 | "Conscious Sedation" | 12:15pm | 1 hour |

#### Orthopaedic & Reconstructive Research Foundation

|        |  |        |         |
|--------|--|--------|---------|
| Dec. 4 | Clinical Medicine of the Future: Advances<br>in Primary Care | 8:00am | 4.5 hr. |
|--------|--|--------|---------|

#### St. John Medical Center - Gail Hilst - 918-744-2875

|         |   |        |        |
|---------|---|--------|--------|
| Dec. 2  | Critical Care Conf. - Lower GI Bleeding     | 12noon | 1 hour |
| Dec. 7  | Critical Care Conf. - Atrial Arrhythmias    | 12noon | 1 hour |
| Dec. 9  | Critical Care Conf. - Poisonings & Dialysis | 12noon | 1 hour |
| Dec. 14 | Critical Care Conf. - Coagulopathies I      | 12noon | 1 hour |
| Dec. 16 | Critical Care Conf. - Case Review           | 12noon | 1 hour |

#### Valley View Hospital - Belinda McSwain - 580-421-1467

|         |                                 |        |        |
|---------|---------------------------------|--------|--------|
| Dec. 16 | "Update on Diabetes Management" | 12noon | 1 hour |
|---------|---------------------------------|--------|--------|

*For information regarding a listed course, call the appropriate contact. For information regarding CME requirements or becoming an accredited provider, call Barbara Matthews, OSMA CME Coordinator, at 405-843-9571.*

**Joyous Holiday Greetings  
from the  
Oklahoma State Medical Association Alliance  
Board Members 1999-2000**



*Illustration by  
Adam Breipohl - age 10*

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Sandra Hook  
Siham Ramadan  
Lisa Henry  
Sherry Strebel  
Sandy Breipohl  
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*Contributions to the American Medical Association Foundation have been made  
by these individuals in celebration of the coming holiday season.  
We wish you joy in the New Year ahead!*

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# THE LAST WORD

## **Oklahoma Makes the Grade**

Oklahoma is one of only eight states that has received an "A" grade from a national commission studying the capacity of states to identify and track birth defects.

The Pew Environmental Health Commission, created by The Pew Charitable Trusts, released on Nov. 16 the first of a series of reports designed to raise public and policymaker understanding about the need to improve and invest in the country's public health system.

Oklahoma's high mark can be attributed in part to its Oklahoma Birth Defects Registry, with an active statewide surveillance system and timely data production, which The Pew Commission report termed as "outstanding."

## **How to Use Those Tobacco Funds...**

Robert McCaffree, MD, on behalf of the OSMA and as vice chairman of the Tobacco-Free Oklahoma Coalition, presented to the House Appropriations and Budget Committee regarding the use of tobacco settlement funds. He advised legislators that dedication of the tobacco settlement funds to programs for tobacco use prevention, cessation, research, and treatment has become the number one priority of the OSMA.

He shared three important messages:

1. That tobacco is a major health issue not only for older Oklahomans but also for our children;
2. That tobacco is a major economic drain on Oklahoma and that institution programs to reduce its use makes economic sense as well as health sense; and
3. That there are proven, effective programs to reduce the use of tobacco and the associated health costs.

## **A Turnabout on Rotavirus Vaccine Recommendation**

On Oct. 26, 1999, the National Immunization Program of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices withdrew its recommendation that infants be vaccinated against rotavirus because the vaccine caused an increased risk of intussusception in the first two weeks after vaccination.

Citing that the risk outweighed the potential benefit, the advisory committee unanimously voted to withdraw its recommendation that the vaccine be given at 2, 4, and 6 months of age.

(Reuters, October 26, 1999)

## **Eye Damage Caused by Laser Lights**

A bill to outlaw the "malicious use" of a laser pointer is expected to be introduced next legislative session by Representative Ron Kirby (D-Lawton). Ann Warren, MD, testified before the House Criminal Justice Committee in early November, explaining that 10 seconds of laser beam exposure to the back of the eye can cause serious damage.

## **Meeting Notice**

The 2000 International Conference on Physician Health, "Recapturing the Soul of Medicine," will be March 29 – April 2, 2000.

Cosponsored by the American Medical Association and the Canadian Medical Association, the conference will be held at Seabrook Island, *The Conference Resort*, near Charleston, South Carolina. For information call 800/621-8335 or 312/464-5066.

# JOURNAL

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**The memorial trust that funds the competition was established by the friends and family of Mark R. Johnson, MD, who served two decades as editor-in-chief of the OSMA *Journal*.**



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